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REPORT OF THE SURVEY OF THE PUBLIC SCHOOLS OF PHILADELPHIA

BY

THE PENNSYLVANIA
STATE DEPARTMENT OF PUBLIC
INSTRUCTION

In Four Books
Book IV

Published by
THE PUBLIC EDUCATION AND CHILD LABOR ASSOCIATION
OF PENNSYLVANIA
1720 Chestnut Street, Philadelphia
Franklin N. Brewer, President
Bruce M. Watson, Managing Director

1922

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Book IV

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CHAPTER I

ART

Introductory. Art instruction in Philadelphia schools should stand second to none in the United States. The importance of the subject in the school curriculum is unquestioned, for our public schools must supply schools of painting, design, and architecture and future workers in all the fields of the fine and industrial arts. In Philadelphia we find the very richest of art traditions. These must be maintained and preserved. It was in Philadelphia as early as 1840 that Rembrandt Peale, distinguished portrait painter, laid some of the earliest foundations for art education in this country. The greatest single impetus to art and industrial education grew out of the Centennial Exhibition in Philadelphia in 1876. Philadelphia's art schools are among the oldest and most prized in our country, and she has justly claimed for years those who stand among the greatest of our architects, sculptors, painters, decorators, illustrators, and master craftsmen.

These leaders are as essential to our economic and social welfare as are leaders in industry, commerce, or science. In the interests of human contentment and national prosperity they must be discovered, developed, and conserved. It is the legitimate function of the public schools to meet this need in a manner commensurate with its aims in other fields. The city, the state, the country, need not alone the painters who will paint our pictures and the architects who will fashion our public buildings and dwellings, but they need also designers who will beautify and enrich our manufactured products. There must be provided those who will design for our textile trades—silks, printed cottons, embroideries, laces, carpets and rugs, wall paper, furniture, lighting fixtures, ornamental iron, pottery, glassware, and other industries. There must be provided illustrators and designers for this almost unlimited field of commercial design and advertising art. Our girls must be prepared to meet both the individual and the trade demands for costume illustrators and designers, interior decorators, and general artistic homemaking. There must likewise be developed fine aesthetic judgments—the thing we call "taste"—in the public at large in order that there may be intelligent and appreciative consumers who will ever desire and seek to acquire the finer and better thing. The consumer in the final analysis encourages by his choice the further production of the cheap and bad, or the beautiful and truly fine and lasting thing, as the case may be. There is economy as well as satisfaction in the possession of such judgments. The question is properly raised: What is the

use of artists and manufacturers producing good work if there is no public to appreciate it? The question arises, then, as to how these needs and expectations are being met in the public schools of Philadelphia and how this work compares with work in other cities which may be accepted as standards for comparison.

Art Education in the Elementary Schools. The elementary art instruction in Philadelphia is organized along lines similar to that in other cities. There is a Director of Art Education, assisted by ten supervisors, for the whole city. These supervisors have definite assignments to various elementary school buildings. The instruction in the classroom is necessarily given by the regular grade teacher in charge. In junior high schools, schools organized on the Gary plan, and schools organized on a departmental plan, teachers are specially assigned to this instruction. The time allotment for the drawing and handwork is as follows:

	Drawing		Handwork	
	Periods	Minutes Each	Periods	Minutes Each
Grades 1, 2	3	25	2	30
Grade 4	3	30	1	60
Grades 5, 6, 7, 8	2	45	..	..

The Course of Study in Elementary Grades. This is prepared by the Director of Art Education with the coöperation of his assistants. The Director has prepared and published very complete outlines and instructions for all grades. These outlines cover the work that has usually been practiced in the various lines of representative drawing, design, color study, construction and handwork, and picture study. There is, however, a growing tendency to relate these outlines more closely to certain centers of vital interest throughout the various grades. These motivating centers are costume, the home, occupations, etc.; or they are sometimes described as food, shelter, clothing, occupations, recreation, and records. This plan naturally leads to a very intimate correlation of the art work with other studies. For example, one finds the subjects of costume and the home developed from the doll dress and doll house in the first grade, and the idea carried through successive grades. But in Philadelphia such sequence is less noted.

The operation of the course of study in Philadelphia is more open to criticism than is its content, however. The following impressions and criticisms of the course are offered, and they are explained by the conditions noted above in regard to limited supervision rather than to lack of effort or intent on the part of those who supervise. In spite of good results that are obtained in many individual cases, inspection in

a number of schools of various types and conditions leaves the following impressions:

1. There is noted the absence of correlative handwork, sand table projects, etc., in primary grades. It is not customary to find a primary teacher drawing, modeling, constructing, doing community projects in the teaching of geography, language, etc. This may be due to lack of primary supervision.

2. There is less free illustration than might be expected. Much of this work should be articulated expression and carried on by primary teachers in the interests of their regular work.

3. The construction and handwork is not so good, grade by grade, as it should be, because of infrequent help, and not so attractive as it might be, because of a limited supply of colored papers and paints.

4. The design work would be much improved if there were better examples at hand to develop ideas and set standards. Not only reference plates but nature and other source material are needed.

5. Object, or representative drawing, would be improved by more definite instructions, illustrations, and more attractive models to draw from. In upper grades these should be developed more in the spirit of still life and other objects as reproduced in our poster and magazine advertising.

6. Both lettering and color study should be developed grade by grade in sequence. In practice, teachers seem to miss this logical development and each does not see her part in preparation for the next progressive step in color chart or other problems.

7. An excessive amount of formal pose drawing is noted, and this hardly justifies itself in the light of greater needs and interests. Through action drawing, story-telling pictures, silhouettes, the clothing of doll figures, costume design, and figures applied in poster making, interest in figure drawing is increased and the subject is better explained and justified.

8. There is less application of the work in drawing, design, color, and construction to the pupils' dress and home decoration problems than is the practice generally.

Emphasis may well be placed on such objects as posters, dress, and home problems, for these touch life at every point and interest school authorities and parents alike in the practical purposes and vocational possibilities of our art instruction. Moreover, these problems call for the best applications of our drawing, design, and color study. It must be understood that the director and supervisors have these same aims and purposes and that the course of study attempts to provide for them; but in actual practice unsatisfactory results are largely accounted for, as has already been noted, by inadequate supervision, reference

material, and supplies. There should be noted the generally fine and earnest spirit which exists between the director and his assistants. In visits with each and every one of these supervisors, the impression was gained that they had all established sympathetic and friendly relations with their teachers, and that the teachers were for the most part responding to the best of their ability.

Supervision. Supervision in Philadelphia is insufficient. There are, as already noted, but ten supervisors in the entire city. Each is assigned to an average of twenty-eight school buildings, with an average total of four hundred teachers. Under favorable conditions, but four visits are made to each room in an entire year. Because of interruptions, the number of these visits is frequently reduced to three. Yet this small group of specially trained supervisors are indispensable to the large number of untrained teachers. The question arises as to whether any subject can be satisfactorily developed with contacts so infrequent, and if it is economical to attempt it so long as the group is too small to obtain satisfactory results.

Duties of the Art Supervisor. The art supervisor finds upon entering a room that a teacher may approach her instruction in drawing, design, color study, and construction or handwork with less confidence than any other subject that she teaches. The supervisor must inspect and give constructive criticism of the work done during the several weeks or months since her previous visit. She must be prepared to give help where needed, either through a blackboard demonstration, or a model lesson, and, most important of all, she should give very definite instructions for the work to be accomplished during her absence up to the time of her next visit. The desired results depend to a large extent upon these very clear and definite instructions, illustrations, or models for the teacher to follow. The supervisor should not feel or be rushed in her classroom visits. She should advise the grade teacher of the approximate time of her visit, so that the room teacher will be prepared for her coming and prepared to receive the individual help and instruction that cannot be obtained elsewhere, because of the infrequency of teachers' meetings. In addition, she should be allowed time to consider the questions that may arise in the principal's office relative to supplies and other matters so essential to the successful conduct of the work.

It must be evident that no ten* specialists can cover a city the size of Philadelphia in a satisfactory manner. It is simply a physical impossibility. In some cities teachers are visited as frequently as twice in a school month, being able as a consequence to go over the

* See Addenda.

work of the two weeks past, give definite instructions and helps for the two weeks to follow, and any other assistance that the occasion requires.

Suppose that in Philadelphia a supervisor were able to visit each one of the teachers in her assigned district *once each month* of the school year—and this would appear to be at least a reasonable allotment of time under the circumstances—there would be required twenty supervisors instead of ten. This is estimated on the basis of an assignment of two hundred teachers, ten teachers to be visited each day of the school month. The estimate is a reasonable one.

The Public Industrial Art School, located at Park Avenue below Master Street, is unique in that it offers opportunities to pupils in elementary grades who have special art interests. Probably no other city conducts a school of this kind where pupils below the high school may receive such special assistance in discovering their individual capacities. The school is open in the afternoons only. It offers expression in blackboard drawing, nature drawing, design, water color, wood carving, clay modeling, and pottery work. Pupils are selected from different elementary schools and attend one afternoon a week. The attendance averages one hundred and fifty daily, with accommodations for two hundred. The principal and teachers are exceptionally efficient and devoted. The following are some observations and recommendations:

1. The school is worthy of better equipment. Old, badly damaged carving benches, for instance, are unsightly and not conducive to the best results or to proper respect on the part of pupils. A kiln for firing the pottery and other clay work of the pupils is greatly needed and its installation is urged.

2. The work in design, clay modeling, and wood carving should be further applied in directions already taken, so that the pupils' efforts will result in desirable objects for use rather than in mere exercises.

Art Education in the High Schools.—Objectives for Junior High Schools. The aim is to develop a course of study in art instruction which would be complete in itself as a junior high school course, should the pupil leave after the ninth year, and would also be preparatory to the course in the senior high school. The teaching of art in this course is intended not only to discover, conserve, and direct pupils of talent, but also to teach in a general way the fundamental principles of art, to develop good taste and sound judgment, and to awaken an appreciation of the best in all that we call art.

The Holmes Junior High School. The Holmes Junior High School, being at this time the only one of its type in Philadelphia,* requires

* See Addenda.

special mention. The comparatively recent development of this type of school has prevented any settled opinions as to a standardized course of art instruction; but in this school, the art instruction is in the spirit of the junior high school aims and purposes. It is not possible in this report to describe the work in detail; but we can commend the attractive appearance of rooms, the character and quality of the work, and especially the devoted spirit of the teachers in charge, together with the helpful and sympathetic spirit of the principal.

It is understood that the junior high school offers advantages over and above older types of organization, and attention is called to the fact that while ninety minutes are provided in the elementary school, there is no art instruction provided in the seventh grade in the junior high school. The usual requirements provide at least one sixty-minute period a week for art instruction in each junior high school year.

Objectives for Senior High Schools. The art instruction in senior high schools should be planned with a consideration for certain specific individual needs and the more general opportunities offered in the social, industrial, and commercial activities of the city. In planning to meet these needs, there would naturally be developed a course of study similar in most respects to courses developed by leaders with similar aims in other cities. The course should, therefore, be estimated in its relation to the best plans elsewhere and an effort be made through timely revision to keep it plastic rather than inflexible, adaptable to changing conditions, and in every case expressive of unity of aims rather than of cold and hard uniformity.

In Philadelphia one is not impressed with a large, well-thought-out plan to meet real and definite objectives. Splendid things are being done in this or that high school, but they may be likened to beautiful pieces of mosaic scattered here or there instead of being brought together and arranged in a noteworthy and beautiful pattern.

Girls' Schools and Boys' Schools Compared. The work in the high schools for girls in meeting expectations and generally accepted standards is better, as a whole, than the general work in the high schools for boys. This may be accounted for by the conditions that require men teachers frequently to divide their interests and attention between instrumental, or mechanical, drawing, and free-hand drawing, or art instruction. A man trained along mechanical lines, either as teacher or head of a department, has different inclinations and interests, often from childhood, from one trained in fine art.

In the schools for girls the head of the home economics department is usually placed in charge of the art instruction. In the schools for boys a man with the training of an engineer may have similar super-

vision over the art instruction. In actual practice this plan works successfully in many cases, particularly where the art teacher is given sympathetic coöperation and freedom and where the best kind of teamwork prevails. On the other hand, the subject of art and the teacher both seem to be placed in a subordinate position. The place of art throughout its history, and the need of art and art education in America, would seem to warrant the greatest consideration of the subject in our high school programs.

Equipment a Contributing Factor. In most cases, in the boys' schools the equipment is designed to meet the requirements of the mechanical draftsman or drafting room, while free-hand drawing, design, and color work have not an equipment adapted to their specific needs, or that can play an important part in securing the desired results. Given adequate equipment, drawing stands, filing cabinets, cases, reference books and inspiring pictures, plates and other source material, one should reasonably expect to find likewise a teacher whose whole training, interests, and experiences are along the special lines of art education as we know it today. The impression was gathered that good teachers and pupils of promise are handicapped by unsatisfactory conditions of tools, supplies, equipment, inspirational source material, plans, and professional guidance.

Particular Merits in Girls' Schools. Both the character and the quality of the work in the high schools for girls demand special mention. Heads of departments and teachers are not only capable and generally well equipped for their special work, but they have realized the special needs of girls in their relation to taste and beauty; and they have shown a familiarity with the best practices in other cities and have separately developed along much the same lines.

One finds in the girls' schools not only an intimate correlation of work in drawing, design, and color with the household arts course; but likewise that this drawing, design, and color is applied in forming æsthetic judgments and refined taste in matters of personal attire and more beautiful homemaking. This culture has likewise been expressed in costumes for graduation and school plays. One school has rooms available for the practical development of the home decoration theories and principles worked out in the classroom. One of the leading stores loaned the furnishings which were selected by teacher and pupils as a result of a shopping expedition. Lamp shades, table covers, curtains, etc., were designed and made by the pupils. The result is impressively harmonious and the effects of such teaching are far reaching.

Particular Merits in Boys' Schools. In one high school the work in lettering, commercial design, and advertising art is particularly

noteworthy. Since this is one of our largest fields for employment, it follows that such work should be developed equally well in other high schools, particularly in those for boys. Furthermore, every business man comes face to face, sooner or later, with his own problems and feels the need of knowing for himself what is best and most appropriate in his own special line. In other high schools there is splendid metal craft artistically designed; linoleum and wall paper designs are noted because of their quality and applicability. There is also noted the unusual quality of the drawing, design, and color rendering in the course in architectural drawing.

Time Allotment. There is considerable variation noted in the figures giving the distribution of credit hours, pupil hours, and teacher hours for art in different schools; and these differences become more complex when multiplied by differences in the assignment of several groups (academic, home economics, commercial, mechanic, and industrial arts) in the different years.

A composite schedule shows the allotment of groups and periods as follows:

	Academic.*	Commercial.	Home Economics.	Mechanic† Arts and Industrial Arts.	Nature of Work.
First year H–G	1 period 90 min.	1 period 90 min.	1 period 90 min.	1 period 90 min.	Same for all groups
Second year F–E	1 period 90 min.	varies	1 period 90 min.	2 periods 90 min. each	Same for all groups
Third year D–C	1 period 90 min.	varies	2 periods	2 periods 90 min. each.	Special for each group
Fourth year B–A	1 period 90 min.	varies	2 periods	2 periods 90 min. each	Special for each group

Required vs. Elective Work. The art instruction in Philadelphia high schools is generally "required." As a result there are frequently found classes that are too large. Out of such classes there comes a lack of interest upon the part of many, and from this lack of interest there arise conditions unfavorable to obtaining the best results. After the best efforts have been put forth in elementary grades to discover aptitudes and interests and to develop artistic skills, the question arises whether it is not better to continue the work intensively rather than extensively, and in that way to offer the very best opportunities and facilities to those with special capabilities and interests.

If a general preparatory course should be required for entering pupils in all groups, for the first year only, such a course would lay

* Among the academic pupils are those planning to teach and consequently requiring satisfactory instruction preparatory to the work in the normal schools.

† Includes mechanical drafting.

certain foundations in general representative drawing (perspective principles, pencil, crayon and other technique), design, lettering, color study, and art appreciation. There might then follow during the succeeding years special elective courses, motivating about live centers of very great interest. These courses, already followed to some extent, may be listed as follows:

1. *Commercial Arts*
   Applied to the printing and advertising arts.
2. *Industrial Arts*
   Constructive and applied design. Wood and metal crafts. Furniture, wall paper, textiles, pottery, etc.
3. *Interior Decoration*
   With aims for both taste and appreciation and also professional practice.
4. *Costume Design*
   Especially applied to girls' needs in matters of choosing and designing dresses, millinery, and related accessories. Also costume illustration for fashion journals, store advertising, etc.
5. *Pictorial Arts*
   For pupils interested in illustration, painting and the fine arts.
6. *Architectural Course*

There would be necessarily some combination of courses to meet special requirements and individual conditions.

Assignments might be made in the required first-year preparatory course of two periods a week. Assignments to advanced elective courses, with smaller groups, might be made for one period daily, or four periods per week at least.

It must be understood that it is not the purpose or expectation to equip high school pupils to step out as successful designers or finished artists, but rather to discover and sustain special interests and offer a purposeful art instruction that will provide the *thoroughness* that men in the trades and professions say is so lacking in American education compared to that of the foreign along similar lines.

The subject matter as in other cases should be worth while to the extent pursued and at the same time should be planned and carried out by teachers with a first-hand knowledge of the requirements made by the advanced schools of both Fine and Industrial Arts, and by the demands of the trades and professions.

A Suggested Course in Art Appreciation. To these courses should be added a general course in art appreciation. This might well be a

course for the entire student body, dealing with the elements of beauty or the principles of design, developing knowledge and establishing sound æsthetic judgments in both the fine and useful arts. This course should include architecture, sculpture, painting, and handicrafts, both ancient and modern, American and foreign. In some of the high schools, splendid work of this kind is noted. Some schools are provided with stereopticon slides, others make use of prints, and some teachers develop much in the way of appreciation along with technical rendering in the classroom. An occasional period in assembly might well be given to this subject. Stereopticon slides may be borrowed from the local museum and other local institutions, and outside speakers may be invited to cover special fields.

Handicrafts in High Schools. Well planned craft courses with special rooms and equipment for jewelry making, copper work, book binding, and pottery work have been established in connection with the art instruction in many high schools throughout the country, but not yet in Philadelphia. Some beginnings have been made, however, in a number of cases, principally in girls' schools, with very simple and inexpensive equipment. Decorated lamp shades, batiks, stencils, and table covers, decorated boxes, linoleum blocks, etc., have been made. A small printing equipment has been established in a few schools. There also exists an opportunity to make hand-cut linoleum or wood blocks and generally apply their design and craftsmanship to the printer's art.

Philadelphia Normal School. Our future teachers who will go from our high schools into our normal schools must be prepared to draw and to give elementary art instruction along with other subjects. The art work in the Philadelphia Normal School is in the hands of capable and enthusiastic teachers. These teachers should find their students prepared with a foundational training in technique and appreciation in order that they may deal more thoroughly with the theory and practice of teaching the subject.

The Philadelphia Normal School is doing much to abolish fear of the subject on the part of these student teachers and it is implanting a wholesome regard for the subject and a belief that it is a necessary feature in our educational program. The effect of this instruction is shown by the fact that teachers are adding much to the clarity and impressiveness of their teaching by fluent blackboard illustration of various school subjects. In other words, they have learned the value of giving expression to their ideas and of drawing as language pure and simple.

General Outstanding Impressions.

1. In Philadelphia there is more than the usual break in the sequence and continuity between elementary and high school art work.

2. Individuals and individual schools are working independently of each other without the direction that should result in a greater unity of plan and action..

3. The art teachers in Philadelphia high schools are, as a class, as well prepared, as earnest, and as capable generally as are those found in any other city; but unfortunately, due to lack of responsible leadership, the work secured by these teachers bears in many cases an unfavorable comparison with work in other cities that might be accepted as standards.

4. This condition, however, may be further accounted for by (*a*) a lack of adequate furniture, (*b*) by a lack of inspiring models and source material, and (*c*) by a lack of suitable supplies.

5. Generally speaking, there is better equipment, a better plan of work and better work being done in the girls' schools than in the boys' schools.

Correlation with Other Work. For years the art instruction and handwork have been recognized as a valuable agency for clarifying and motivating many of the regular school subjects. The art department has sought every opportunity for such service, and has been recognized as a willing agency to advertise any school event, work for better English, or for school pride in keeping rooms and corridors neat through posters with real art and decorative value. Further correlation is established in connection with the household art work for girls and the shop work for boys. Science and other departments of instruction are helped, and for dramatic productions costumes are designed and scenes painted.

This correlation, which educators have generally grown to expect today, is not so satisfactorily established in connection with the shop work for boys. This is the fault of unfavorable conditions of schedule, conflicts, and large classes, rather than from a lack of desire, willingness, or ability, either on the part of the shop teacher or of the art teacher. The one needs assistance; the other should be glad to apply his art instruction to practical needs in metal work, wood carving, and furniture design. The designs for the shop work should be prepared in the art room by each pupil to meet his particular problem, the teachers in each department having a thorough understanding at all times. There is some splendid work turned out of these shops, but how much better this work would be if refined by carefully studied designs prepared in

the art room, and how much more purposeful and real would the design instruction be if thought out to meet real and definite shop needs.

Supplies for Art and Handwork. These supplies are requisitioned by the principal according to a quota list prepared by the director and his assistants. The superintendent of supplies is earnest in his desire to procure the materials desired, and his task of selecting, purchasing, and distributing the right thing to its right place at the right time is not an easy one. The human factor fails oftentimes and one hears complaints that supplies are delayed or are not as ordered, and the work suffers as a consequence. Supplies must be at hand for the work desired, and the right kind and quality for the particular need, or the results in Philadelphia will not compare with the work in cities where all the conditions of supplies and equipment are favorable.

Since art supplies must be ordered by the principal and handled by store-room employees, the number of varieties should be reduced as far as possible in order to secure a consequent reduction of errors. By careful study, more desirable material for less cost can often be substituted. Great economy has recently been effected by the purchase of paste in powdered form. Dry cakes of water color are more economical than moist ones and easier to handle in refilling boxes. The wider use of less expensive but more interesting toned papers would save money. A better grade of crayon may be more economical in the end as it carries less paraffin and breaks less. Especially should there be more color and colorful papers provided, for other cities are doing and showing much more color, particularly in the use of colored papers. Efforts to obtain reliable figures that would give the comparative per capita cost of these supplies in Philadelphia with those of other cities have not been successful. No special appropriation is made in Philadelphia for these supplies. Some cities furnish but a portion of the supplies, the pupils buying the remainder, and of course the character of work done differs considerably.

In theory the machinery in a large city should operate as smoothly and perfectly as that in a much smaller one, but so far as art instruction and supplies are concerned, it does not. Philadelphia has apparently not been niggardly in supplying funds for art materials; and if supervisors could give more time, with the coöperation of the principal, to the supply problem, the supply department would effectively do its part.

In addition to the regular drawing supplies, there is great need of inspirational reference material of all sorts. Very few schools have the illustrated plates and other references, color charts, and attractive models, that they should have. We can not expect ideas to grow or be

expressed without first implanting those ideas through a wealth of source material.

The Decoration of Buildings. The attractive appearance of our school interiors should be the concern not only of art teachers, but of every one interested in the education and character-building process of our boys and girls. "We may live without pictures and perhaps live as long; but we cannot live as well." We are influenced unconsciously by the noble or ignoble things about us. Our boys and girls should be surrounded by the great art of the ages, and we are obligated to modern processes of reproduction for making this possible in every school and home.

Plans for new buildings should carry provisions and appropriations for school room decoration and for beautiful school grounds as well. Attention should be given to the choice of the very best colors for school walls. Cheer can thus be brought into dark rooms and the necessity for artificial light reduced. Consideration should be given to the proper height of blackboards, the space above for hanging pictures, and the exhibition panels.

Attention is called to those teachers who make the most of little and whose rooms are a joy to children and visitors alike; their blackboards are neatly decorated, there are plants in the windows, and with attractive color prints clipped from magazines, the results are impressive. There are many evidences of the most commendable activity, past and present, by principals, teachers, graduating classes, and home and school leagues in the interests of school decoration. Both the quality and number of prints, pictures, and casts in some elementary school buildings in Philadelphia impress one most favorably, for they are unusual.

The art room in a high school building should be a beauty spot and unmistakably advertise itself. If barren and unattractive, it might well become a problem for the pupils in appropriate decoration.

> "In the decade ending with 1920 the Fellowship of the Pennsylvania Academy of Fine Arts, has loaned to fifty schools in Philadelphia and vicinity, for a period of four weeks each, groups of from thirty-five to sixty-five pictures from their Annual Exhibition, jury selected."
>
> —*From Fellowship Annual Report.*

The Encouragement of Gifted Children. Every effort should be made to encourage and conserve the boy or girl with exceptional gifts along art lines. Philadelphia has done this to a marked degree. Scholarships are provided by appropriations by the Board of Public Education

so that a few at least may enjoy and profit by the opportunities for advanced instruction offered by the art schools of the city.

Teachers coöperate in the best possible manner, forming Sketch Clubs or Art and Craft Clubs and generally give interested and talented pupils special assistance and preparation to meet the requirements of the several art schools. In one school a club room has been placed at the disposal of such a group of interested students.

Provision for Scholarships. In September, 1897, the Board of Public Education resolved to maintain fifty-one free scholarships for the (then) three years' course in the School of Industrial Art of the Pennsylvania Museum. Twelve scholarships annually were allotted, two each to the five High, Manual, and Normal Schools, two to the Public Industrial Art School, and five to graduates of the grammar schools.

In July, 1906, in consideration of an annual appropriation of $10,000, made by the Board to the School of Industrial Art of the Pennsylvania Museum, the trustees of this institution offered thirty-six additional free scholarships for the full term of three years to the pupils of the public high schools. This annual grant to the School of Industrial Art was continued to within a few years. Subsequently two free scholarships each year were granted to each one of the High and Normal Schools, the Board paying the tuition of each scholar for the full term of four years in this institution. At present but one scholarship each year is granted to the high schools, now fourteen in number.

In February, 1895, in consideration of an annual grant of $5000 made to the Pennsylvania Academy of the Fine Arts, a joint committee of the Board of Public Education and the trustees of this institution agreed to maintain fifteen free scholarships annually for graduates of the public schools, to the full course of three years; twenty-five scholarships to be the minimum number after the first year. At the present time the arrangement is the same as with the School of Industrial Art of the Pennsylvania Museum; namely, one free scholarship each year is allotted to graduates of each one of the fourteen High and Normal Schools, the Board paying the tuition of each scholar for the full term of four years.

At present and for several years past the Board of Public Education has granted one free scholarship each year to graduates of each one of the Girls' High and Normal Schools, for the full term of four years to the Philadelphia School of Design for Women.

The Need for Better Salesmanship. Art instruction in the Philadelphia schools has long been accepted as an established branch of the

school program, but one is impressed with a feeling that growth of understanding and appreciation on the part of those outside the special field has not been commensurate with the progress and significance of the work itself. In other words, the art products need to be exhibited, explained, and generally advertised so that there will be a growing community appreciation, even pride, manifested in this work in the Philadelphia schools. There is no question as to the value of the work; it is merely a question of understanding. The work must be made valuable, with emphasis on the practical side if necessary, to further explain and justify itself as a real investment instead of a luxurious expenditure. Both the vocational aspects of drawing, design, lettering, and construction, and the cultural values as well, must be made clear and understandable to teachers, parents, and taxpayers.

Insufficient supervision, as well as a certain subordinate position which art frequently occupies on report cards, in examinations and promotions in relation to other school subjects, might be attributed to lack of sufficient energetic championship and publicity for the subject.

SUMMARY OF RECOMMENDATIONS

Any one familiar with the many problems and difficulties confronting a director of art education and his assistants in a city the size of Philadelphia is naturally sympathetic because of such knowledge. As any one looks for both the good and bad, an effort should always be made to bring the poor up to the best. The following recommendations are made in this spirit and with the belief that the better results that should be desired by all concerned will be realized:

Elementary Schools

1. Additional supervisors should be provided for the purpose of permitting more frequent visits, more individual instruction, more teachers' meetings, and a closer touch with materials and supplies. The advantages of assigning supervisors to districts rather than to schools scattered in various parts of the city should have careful consideration.

2. Additional and improved illustrative material and models for each school should be provided.

3. There should be greater familiarity with similar work such as courses of study, supplies, and equipment in other cities for purposes of comparison, profit, and encouragement.

4. The director of art education and the supervisor assigned to the school should serve in an advisory capacity when purchases are to be made for decoration purposes. To choose the best reproduction of

a worthy and appropriate subject requires much special training and experience.

5. Display boards or some sort of exhibition panel should be provided in classrooms so that drawings and references, as well as other school work, may be displayed to advantage in a neat and orderly manner.

High Schools

1. To avoid confusion with instrumental, or mechanical, drawing, and to follow precedents established in other cities, the work known as free-hand drawing should be designated by the broader and more comprehensive term Art Instruction, or Art Education.

2. There should be taken under advisement the merits of the elective courses proposed above for the tenth, eleventh, and twelfth years.

3. Regular monthly conferences of heads and assistants should study, through discussions and exhibits, noteworthy work in other cities with the object of making the work in Philadelphia, rich in its art traditions, second to none in the country in both the character and the quality of its art instruction.

4. The art room in each school should be equipped according to its needs with furniture, pictures, books of reference, models, and drawing materials in order that there be no material hindrances to best professional attainments. There should also be supplied certain current magazines: for example, "The House Beautiful" for interior decoration and furniture design; "The Printing Art" to give the best in printing and commercial art; a good fashion magazine for costume design; "Arts and Decoration" for general information and inspiration, etc. If these are supplied and clippings made and classified, there will soon be a valuable and very inexpensive reference library established in each room used for art instruction.

5. There should be prepared an improved list of art supplies in order that the work in each school may appear and be exhibited to as good advantage as work from any other city. Otherwise the work in Philadelphia may on occasions suffer by comparison. Better colors, crayons, tempera colors, and papers of attractive tints are needed properly to set forth the work to best advantage.

6. Teachers should be encouraged to visit and observe the work in other schools in Philadelphia and elsewhere without loss of pay, a substitute teacher being provided as occasion demands.

7. Finally, there is needed enlightened, progressive and friendly leadership to the end that there may be a coördination of all good forces working harmoniously toward a common high attainment.

The teacher's duties confine him necessarily to classroom work. His opportunities for travel, observation and comparison are limited. Frequently he must feel his way alone, and is handicapped in his work because of conditions and circumstances that an expert and sympathetic administrative head might improve or correct. In order that there may be an uninterrupted development and growth in art education there should be a director responsible for the organization, administration, and supervision of art education throughout the entire public school system of the city from the kindergarten to the last year of the high school. The director of art education should likewise assume the responsibility of selling Art Education to the community; that is to say, he should through exhibits, addresses, etc., explain the aims and purposes so that teachers, taxpayers, and all concerned may understand the importance of art and art education in American life. He must also make clear both the practical values of art, functioning in business and industry, and the cultural values working for finer living and greater happiness and contentment through a larger grasp, understanding, and enjoyment of the beautiful creations of both God and man.

ADDENDA

1. Five (5) additional assistants have recently been authorized. One of this number has been regularly appointed and assigned to Colored Schools.

2. In September, 1921, three new Junior High Schools were opened, making four in all.

CHAPTER II

COMMERCIAL EDUCATION

Introductory. At the outset in this report on commercial education, I want to emphasize a few points to avoid misunderstanding on the part of those whose work was surveyed and others who may read what is set forth herein.

First, every person with whom I came into contact in making this survey was courteous, helpful, and coöperative to the highest degree.

Second, Philadelphia is by no means unique in its partial failure at least, to provide adequately for the organization and management of its commercial education program.

Third, the new Superintendent and the Associate Superintendent in charge of high schools are deeply interested in this field of education, and it is assumed that they will welcome any adverse criticisms, if constructive suggestions accompany them.

Fourth, for the most part the heads of departments and commercial teachers are well trained and competent. They have made the best possible progress under the conditions with which they are surrounded.

Fifth, in many of the criticisms made in this report I am but emphasizing criticisms that have been made repeatedly by the heads of departments and commercial teachers themselves.

Sixth, the statistical figures used herein are intended to be only approximately correct. They were furnished me from the school records based on definite information possessed by those who made them. For the purposes used they may be regarded as sufficiently accurate.

Purposes of the Survey. The primary purpose of this survey is to determine the extent to which commercial education in the city of Philadelphia is meeting the requirements of the boys and girls of this great industrial center. To this end the following items in this study have been considered:

1. To what extent is the necessary administrative support being given to commercial education?

2. Have definite and proper aims been set up by those responsible for this field of education?

3. If such aims have been set up, to what extent are they being realized?

4. Are the commercial courses adapted to the requirements of modern business?

5. Are such courses differentiated for the benefit of boys and girls with widely divergent aptitudes and abilities, or are they so organized as to permit of little vocational choice on the part of those who take them?

How the Survey was Made. A period of about seven weeks was devoted to this task. Every high school, continuation school, and evening school in which commercial work of any kind is offered was visited. From two to three days were devoted to each school. The superintendent, associate superintendent, vocational education director, principals, heads of departments, and teachers were interviewed at length. The literature of the city education department bearing on this phase of education was carefully studied. Pupils now in school were questioned. Graduates in a few cases were interviewed. The members of the graduating class of January, 1921, were traced to determine whether or not any or all are making vocational or other use of the business training received. The information given on questionnaires submitted to the State Department of Public Instruction by commercial teachers and commercial department heads were carefully examined. The results of the English tests given were considered. Special tests in commercial arithmetic, shorthand, and typewriting were given to appropriate classes in all the high schools. Five private business schools were visited to ascertain whether or not Philadelphia boys and girls are paying for what should be made available to them in the public high schools. Data were obtained from the Philadelphia Chamber of Commerce. Three conferences of commercial educators were held during the period of this survey and some light was thrown on the questions under consideration in connection with this study at these conferences.

Importance of Business Education Problem. The city of Philadelphia ranks third in the United States in population. It outranks most cities in many lines of commerce. It occupies a place near the top of the list of industrial cities in this great industrial country. Naturally large numbers of boys and girls seek business training. Of the total number of high school girls 65 per cent are commercial pupils. Of the boys approximately 27 per cent are in this department. The fact that many boys take the technical and industrial courses and that many more boys than girls prepare for college explains the preponderance of girls in the commercial department. The following tables will indicate more clearly the importance of business education in the Philadelphia schools.

HIGH SCHOOL ENROLLMENT BY DEPARTMENTS*

Schools.	Total Enrollment.		Commercial Department.		Academic Department.		Home Economics Department.	Industrial Department.
	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.
D	2,779	....	1,510	....	1,115	....	154	....
A	1,512	....	1,121	....	359	....	32	....
B	1,020	....	749	....	229	....	42	....
E	2,352	....	1,805	....	324	....	223	....
G	....	2,212	....	597	....	820	....	795
H	....	1,581	....	431	....	725	....	425
L	....	2,239	....	653	....	1,252	....	334
I	....	2,159	....	561	....	482	....	1,116
C and J†	939	832	653	204	283	190	3	438
F and K‡	1,745	885	960	237	644	362	141	286
Totals	10,347	9,908	6,798	2,683	2,954	3,831	595	3,394

* One girls' high school does not offer commercial work. † C—Girls. J—Boys. ‡ F—Girls. K—Boys.

EVENING SCHOOL ENROLLMENT

Schools.	Commercial Department.	All Other Departments.	Totals.
M	653	1,316	1,969
N	700	1,400	2,100
O	511	824	1,335
P	222	1,715	1,937
Q	643	2,490	3,133
R	450	1,350	1,800
Totals	3,179	9,095	12,274

CONTINUATION SCHOOL ENROLLMENT—HIGH SCHOOL GRADE

Schools.	Total Enrollment.	Commercial Department.	Other Departments.	Per cent Commercial.
A	77	77	0	100
B	248	55	193	22
C—J*	150	150	0	100
D	0	0	0	0
E	173	173	0	100
F—K†	108	100	8	93
G	37	15	22	41
H	67	67	0	100
I	281	128	153	46
L	151	151	0	100
S	1,100	450‡	650	41
Totals	2,392	1,366	1,026	57

NOTE.—To nearest per cent.

* C—Girls. J—Boys. † F—Girls. K—Boys. ‡ Store classes.

From the above tables some idea of the bigness of the commercial education problem can be obtained, but to get a full conception of it one must remember that total enrollment for commercial work tells only a part of the story. By "commercial course" is meant a complete and well-rounded curriculum in which from 40 to 60 per cent of the pupil's entire program will be technical and semi-technical commercial subjects and the remainder will be related academic work which cannot be ignored by heads of commercial departments.

Commercial teachers and heads of departments are dealing with a complete program of studies rather than with a single subject. They are responsible to some extent for the proper coördination of the related academic work and the technical studies; for advisement of pupils concerning the choice of a business training program; for the proper articulation of all the work of the different years to the end that the vocational objectives may be reached; and for the placement of the pupils in satisfactory positions at the end of the course. They not only must keep up their study of subject content and method like teachers of other subjects, but they must keep their fingers on the business pulse of the community to insure that business education shall be coextensive with the demands of business and remain so in the future, whatever changes may take place in business organization and management. The ever expanding requirements of modern commerce make necessary an ever changing program of business education.

Administration and Supervision. From the statements and figures in the above paragraphs it should be apparent that the wise conduct of commercial education presents an administrative problem quite as important as any other that may confront a school board. In common with many other cities, Philadelphia has attempted no adequate solution of this problem. To be sure, high school commercial work, like all other kinds of high school work, is placed under the general supervision of an associate superintendent who, because of a multiplicity of other duties and interests, and because of a lack of preparation for, or experience in, this particular field of education, exercises over it only a general and more or less perfunctory supervision. The associate superintendent has had no training for supervision of this work. He does not know a single commercial subject intimately, while he does know much about the usual academic high school subjects which he supervises. He has never taught a commercial class nor come into contact with the problems of the business department of any school through an intimate association with such a department. This is no criticism of the associate superintendent. No one man can know all about so many things as are represented in the modern high school. The fact remains that Philadelphia high school commercial education is without any general or purposeful direction and the necessary result is that each school is a law unto itself. We must, therefore, look to the individual school for such supervision as there is.

Under such conditions the situation is not necessarily bad if the principals are qualified to direct this department and are sympathetic with its aims and purposes. But in Philadelphia the principals, with a single exception, have had no training for any phase of commercial

education. In at least five of the high schools they have no appreciation of the scope and content of commercial studies, and in at least as many more of the schools they have little sympathy for any kind of vocational business training. This condition is due largely to the fact that principals have little time to devote to the study of modern practices in commercial education. Their education and experience have led them along entirely different lines. It is apparent in most cases that they will welcome any light that may be thrown on this problem with which as public school principals they must deal.

Finally, we turn to the heads of the commercial departments for evidence of supervision and direction. In many of the schools we find it. In at least seven high schools there are heads of departments who are competent to handle the duties required of them. In the remaining three schools the commercial work is in charge of the heads of the history departments, who apparently have had no special training for nor experience in this kind of work. One of these men is the best teacher of one of the semi-technical commercial subjects I have ever seen, but he lacks experience in the other subjects. All are exceedingly interested in their adopted department. They lack that intimate knowledge of the inner workings of such a department which is essential to satisfactory and helpful supervision. Their contact with their commercial teachers is only in connection with administrative matters. Questions of teaching methods, content of courses, selection of texts, sequence of subjects, time requirements for the different subjects, vocational objectives, etc., are obviously outside the range of their training and experience. In these and many other phases of departmental work they can not be expected to exert leadership or wisely direct the teachers under them in this highly specialized field. This situation is one that does not exist in any other city. The only explanation offered for it is that since there were not enough history teachers to justify the establishment of a history department, the commercial teachers were added. In two high schools the reverse situation exists: commercial men are in charge of history departments. This is not good practice either, but it is not so bad as the other, as these commercial men have had training in history in high school and college. The fact remains that while the history department may not be large enough to justify a separate head, the commercial department is far too large in any Philadelphia high school to be adequately directed by any man or woman who can devote but part of his or her time to the task, or by any man or woman whose training and experience have been along entirely different lines.

In addition to the high school commercial education supervision problem, there are three other departments of business training which

need, even more, the guidance of one who is free to devote his entire time to supervision of this type of training. I refer to the business departments of the Junior High School, the Continuation School, and the Evening School. The importance of these departments is evident from the data which appear on page 20. Later in this report more will be said about the commercial work of these three types of schools.

Thus it would seem that the very first step in the direction of improving business training in Philadelphia would be the appointment of a competent person for the direction of this work.* Whether he is called Director of Commercial Education or Associate Superintendent is of little consequence. The only things that really count are: first, that such person shall be by training and experience competent to exert that leadership which is needed; and second, that he or she be so placed in the school organization as to make it possible to pay a salary commensurate with the importance of the work to be done. It may be stated in this connection that other cities throughout the country are making this provision for the proper direction of this type of training. One city of a hundred thousand people in the immediate vicinity of Philadelphia has just created such a position at an initial salary of $4500, with promise of advancement. Surely it is not too much to ask Philadelphia to do better.

Aims and Purposes in Commercial Education. There is an apparent unwillingness on the part of the administrative heads and many of the commercial teachers themselves, to admit the vocational character of commercial work. There seems to be a division of opinion as to whether or not the primary objective should be preparation for business or for further study. A third group inclines to the belief that commercial courses should be both immediately vocational and preparatory to further study. Again it may be said that there is no crystallized sentiment on this subject which may be regarded as the Philadelphia policy. The tendency, however, is, in the boys' high schools, very strongly in the direction of preparation for further study as against preparation for useful employment. In the girls' high schools a different attitude prevails.

While there may be differences of opinion as to what should be the primary aim, there can be no difference of opinion as to the necessity for definitely determining aims and objectives before setting up any educational program.

It is apparent that in the minds of the boys and girls and their parents the vocational objective is clearly defined. Evidence of this fact is seen in the uplifted hands wherever classes are asked if they

* See Addenda.

expect to use their commercial training vocationally; in the statement by principals that parents frequently protest against the requirement of so many non-vocational studies in the commercial course; in the fact that private business schools in Philadelphia enroll about as many pupils for vocational business training as are enrolled in the high school commercial classes; and in the fact that nearly half of those who enroll for business training leave at the end of the first year, during which no business training of any vocational consequence is given. Commercial graduating classes show only small tendency to go on to college.

The most serious feature of an attempt to straddle between preparing for college and preparing for business is that such a course is good for neither objective. The regular college preparatory course will meet present college entrance requirements far better than will a hybrid commercial course. Likewise a well-balanced business course will be far better business preparation than will a cross between a commercial course and a college preparatory course. The argument was advanced by many that the way must be kept open for cross-over lest some might decide late in their school career to go to college. In principle this is right, but if in practice the great majority of pupils are cheated of their rights and only an insignificant few are convenienced thereby, the practice can scarcely be justified. The following typical situation in one high school will serve to illustrate this point:

There are fourteen commercial boys in the graduating class. *There were 114 in this same class when it started its career four years ago.* The way was kept open for cross-overs by shaping the course largely in the interests of those who might decide late to go to college. Of the remaining 14 only *two* are going to college. *Neither of these two changed his mind about college while in high school;* both intended from the beginning to go to college after graduating from high school. Who can tell how many of the 114 entered high school with the intention of going to college only to change their minds before graduation? The mortality of this class taken in connection with the expressed hopes of present freshmen classes would lead to the belief that many more are disappointed in their early plan to get a full college education than there are who decide late in their high school course to continue training in college.

In this connection, it should be emphasized also that the wide range of extension courses in commerce and other lines offered by the University of Pennsylvania, Temple University, and other Philadelphia institutions makes it possible for an employed young man or woman to get the equivalent of a full college course such as those get who go directly from high school to college on a full-time basis. These extension courses are scheduled for the late afternoon and evening so that

employed people may attend. In the school referred to above, six of the fourteen in the graduating class are planning to enroll for such extension courses as against the two who will devote their full time to college work. It is contended by many that the extension course boys, with the background of experience they will develop along with their studies, will get more out of their courses than will those who because of their all-day program do not back their theory study with practice. It may be stated also that the colleges are rapidly modifying their entrance requirements. Graduates of any four-year course in a standard high school are now being accepted by several colleges. Thus it seems that the way to a college education may be kept open without prejudice to the very large number who have no thought of going beyond one or more years in high school. A public school system should meet the requirements of the largest possible number and happily it may without doing so at the expense of the small group who seek preparation for college.

The second step, therefore, in the further development of commercial education would seem to be the determination of a policy regarding aims and objectives that are to be the guides in this field of education; to recognize the apparent demand for vocational preparation; to establish courses of study that will definitely prepare for useful citizenship and a wide variety of commercial employments; and to abandon the idea that the very insignificant group of students who decide late in their high school course to go to college should be protected from loss of time at the expense of the ninety-five or more per cent who have no thought of going beyond the high school.

Failing to Meet Local Needs. It is somewhat significant that for every boy and girl enrolled in a high school commercial department in Philadelphia, there is another boy or girl enrolled in a private school commercial department in that city. While some of the latter enrollments come from outside the city, a very large proportion reside within the city limits. It is estimated on the basis of reliable information that Philadelphia people are paying annually for private school business training a sum not far below $550,000. One private business school alone registers over 700 pupils whose average age is about 16.

It should be emphasized that the kind of business training received by these young private business school pupils is no more satisfactory from a vocational point of view than is the work now offered in the first two years of the high schools. The high schools should not offer in the first two years such courses as the business schools offer because these courses are not suited to the needs of the boys and girls who would take them. The high schools should offer a junior type of com-

mercial education that will be at once basic for more advanced study and at the same time vocational preparation for those who leave at the end of either of the earlier years. Furthermore, the school board should by appropriate publicity, through its elementary school teachers and otherwise, overcome the common notion that stenographic training is either indispensable or appropriate as a part of the preparation of very young children for office work. By the same publicity method the board should see that the parents of all children are well informed as to the superiority of the junior business training offered in the first two years of the high school over the inappropriate type of advanced business education offered in the private business school.

Commercial Education in the High Schools.—Present "Uniform" Course of Study. After conferences between heads of commercial departments, principals, and superintendents, a high school program of studies was prepared and approved for use in all the high schools. This program is obviously a compromise program in which there are enough *or's*, *footnotes*, *options*, *fine print*, *heavy print*, etc., to insure to each school the continuance of its present program of studies or the development of any new program that may seem desirable. Thus in practice, there is little uniformity in curriculum requirements as will be seen from the discussion of the work of the different schools.

CRITICISMS OF PRESENT CURRICULUM

Academic Subjects. All commercial work in the modern office or store, requires a high degree of mental ability, a good store of general knowledge, and in a few positions a certain degree of manual skill. Therefore, no one can contend successfully that the technical subjects alone should be offered in our commercial curriculums. Boys and girls who are preparing for business pursuits need the best possible command of English; superior ability to handle figure work; a thorough understanding of the demands of modern society and the historical background for them; a certain degree of intelligence regarding the common forms of scientific phenomena with which we are surrounded and with which business men have to do; and such familiarity with general mathematics as may be acquired without defeating the aims of business training. In other words there must be supporting academic work for all proper business training which is provided in an all-day school. In certain part-time schools, courses of necessity may be limited to vocational training.

Severe limitations of space make it impossible to consider the academic subjects separately. In the girls' schools an attempt has been made to adapt the English work to the requirements of com-

mercial pupils. No such attempt has been made in the boys' schools. The work in social studies in the former comes nearer to meeting the requirements of business education than it does in the latter. The present requirements in mathematics in both types of schools are out of harmony with the needs of commercial pupils. The unfinished course in algebra which is required in the girls' schools as a forerunner of business arithmetic is especially bad. In the boys' schools there is a strong tendency to insist that commercial pupils shall meet the college entrance requirements in mathematics. The science work in all the schools is of the usual college preparatory variety notwithstanding the fact that commercial pupils are not going to college. General science is an exception. Steps should be taken to see if modified science courses that will make a stronger appeal to commercial pupils can be developed. Because it is absolutely futile to try to crowd all the essential commercial and academic subjects into a single curriculum, it is recommended that this practice be discontinued in the interest of better business and general education.

Foreign Language. In the Philadelphia high school course of study which was referred to earlier in this report, foreign language is *elective* in girls' high schools. From this it would appear that the girls would be permitted to elect or omit foreign language as they might desire. The fact seems to be, however, that the option is exercised by the school and not by the girls. In other words, the alternative programs were put into the course in order that each school might go on its foreign language or non-foreign language way unhampered by the requirements of any general curriculum.

Thus it happens that in four of the six girls' schools all take foreign language. In one 70 per cent take this work and in the other 33⅓ per cent take it. The registration is divided between Spanish and French in the proportion of about two-thirds and one-third, respectively. In four of these schools foreign language must be carried at least two years, if begun. In one, pupils may drop it sooner "by permission from the principal." In the other, "two years are suggested but not required."

The principal objectives in foreign language work, as stated by the heads of this department in the different girls' schools, may be stated as follows: Three schools teach it for its "cultural" values; one for its "practical, cultural, and commercial geography" values; and two for its "commercial" values. The heads of modern language departments, in general, emphasized the fact that to achieve the "practical" or "commercial" value aim, four years are required; yet practically all of the girls drop this subject at the end of the second year of

it and therefore do not get any ability to use the language in a commercial office. No one was found who had made any study of conditions in the offices of Philadelphia to determine whether the assumption that ability to speak and write a foreign language would be an asset to a girl trained for office work. Inquiry at the Commercial Museum and at the Foreign Trade Bureau of the Chamber of Commerce failed to reveal any widespread demand for stenographers who are qualified to handle translation work. Persons specifically trained for this work are employed to handle it.

For some pupils foreign language should be recommended; therefore, it should be put down with certain other academic subjects as an elective. By "elective" is meant what this term usually implies, one of several subjects which a pupil may choose to make up her program. It is not used in the sense of a subject which the school may require of all or a part of its pupils without regard to the pupils' choice. It should be "elective" to *pupils*, not to *schools*.

Girls' High Schools.—General Statement. There are very significant differences between the work in the girls' high schools and that in the boys' high schools. This is commendable. Furthermore, there is more uniformity among the girls' schools than there is among the boys' schools. The primary objective in the commercial departments of the girls' schools is to a large extent vocational. This does not mean that it is too narrowly vocational. Ample provision is made for home economics training and general education. The courses are for the most part well-balanced. They are fairly well arranged so far as the few who graduate are concerned, but they are poorly suited to the needs of the 85 per cent who do not remain to finish the course.

The vocational aim of the girls' commercial courses seems to be to train for stenographic and bookkeeping positions. To secure this training one must remain the full four years. The fact is, however, that less than 20 per cent of those who enroll for the commercial course do remain to graduate. About 40 per cent leave at the end of the first year, another 25 per cent at the end of the second year, and about 15 per cent at the end of the third year and during the fourth year. It is obvious that the commercial courses in these schools are not satisfactorily functioning as vocational training for about 80 per cent of Philadelphia high school commercial girls. The following table shows very clearly that any curriculum which contains vocational training values only in its third and fourth years will leave 65 per cent of those who enter high school to be trained for office work without *any* business training and about 80 per cent without *adequate* preparation for employment.

MORTALITY TABLE—GIRLS' SCHOOLS, CLASS OF JUNE, 1920*

Schools.	June, 1920, Commercial Class.									
	Entered September, 1916.		Present September, 1917.		Present September, 1918.		Present September, 1919.		Graduated June, 1920.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
D.....	207	..	152	73	86	42	57	28	46	22
E.....	324	..	161	50	136	42	79	24	68	21
B.....	130	..	59	45	34	26	22	17	20	15
A.....	332	..	181	55	114	34	86	26	80	24
F.....	196	..	97	50	57	29	47	24	46	23
C.....	...†	..	37	..	25	..	17	..	14	..

It is obvious, therefore, that such a reorganization of the curriculum as will be adapted to the requirements of those who cannot or will not remain for the full course should be made at once. Definite suggestions on this subject are made on pp. 55-59 of this report.

Commercial Subjects.—Business Writing. This subject is taught by four of these schools one semester the first year and by the other two, one semester the second year. In all but one school four periods a week are devoted to it. In the other, two are deemed sufficient. Practically all of these classes are taught by teachers of bookkeeping who are well qualified for this work. The results are good in one sense and poor in another. Girls naturally write legibly and neatly. All they need is to have correct writing habits established to insure the ability to write without muscular fatigue, or "writer's cramp," hours at a time. The same amount of time spread over a year—20 minutes a day for a year instead of 40 minutes a day for a semester—would be productive of better results.

Elements of Business. This subject has great possibilities. At present it is in a state of experimentation and is of questionable value, except as a more or less general survey subject. There are widely differing attitudes toward it on the part of the commercial teachers themselves. Objectives are vague, and the content of the courses in the different schools varied. In one school it is taught for its "general information" values; in another as "vocational preparation"; in the other schools the "general information," "preparation for bookkeeping," and "vocational" values seem to form a mixed basis for this vague subject.

This course is scheduled for the second year and in most of the schools it is taught in this year during one semester. In some cases it

* Members of class actually enrolled according to schools' records without allowance for retarded pupils.

† Figures not available for this year.

precedes bookkeeping while in three schools it is taught with bookkeeping in a double period. This is no doubt an advantage to bookkeeping, but not to elements of business. In the suggested curriculum on p. 58 elements of business is scheduled for the first year with business writing. The content of the course should include not only "general business information," but also elementary business training for junior office and store positions. In other words, this subject, with business writing and business arithmetic, should form a one-year unit of business training available to all first-year pupils.

Bookkeeping. This subject is well taught; it is taught with its "educational," general business training, and definite vocational values clearly in mind. All girls are required to take at least one year and may elect from one to two years more. Those who specialize in shorthand in the third and fourth years, and this includes nearly all in these years, are not required to carry bookkeeping more than a year and a half or two years. In one school 90 per cent take it three years, however, and in another all are required to take it three years. A few drop shorthand in favor of bookkeeping in the fourth year. To this extent there is differentiation based upon vocational objectives. If much of the paper-work now done in bookkeeping could be done in the previous year in elements of business, the results in bookkeeping would be greatly improved.

Several schools teach this subject two double periods a week instead of four single periods. The wisdom of this plan is seriously questioned. The excuse for it, paper-work, will disappear if the plan suggested above is adopted. Furthermore, an additional period a week should be added to make a full five-period program and to enable teachers to cover the work required. Much better results would be obtained from a daily double period without homework. This plan is desirable because bookkeeping work can be done most advantageously in the schoolroom where there are proper facilities. It also requires the constant supervision of the teacher. The double period daily is a great time-saver in the end. Furthermore, this subject is entitled to full credit toward graduation and either regular homework should be required or an extra laboratory period provided in school to make it the equal of a full subject. The class method of instruction, as distinguished from the individual method, seems to prevail in all schools and is commended.

Shorthand. This subject is begun the third year in all schools. It is taught five periods a week two full years in all schools. All third-year commercial pupils take it, with a very few exceptions. In one

school 15 per cent drop out the first term. In another school a few are advised to discontinue at the end of the third year. In this course the vocational objective is very pronounced. Practically all girls expect to use it in office work. The entire commercial course has been shaped to this end. Naturally most of the 20 per cent who survive to the fourth year will succeed as stenographers, although doubtless a part of these girls would be more successful as salespeople, general clerks, or as expert file clerks.

The speed aimed at varies as follows: three set 100 words a minute as their requirement; one graduates on a 90 words a minute basis; and two are satisfied with 80 words a minute. All should reach 100 words a minute on ordinary letter and solid matter. Speed requirements are of little significance except in connection with the type of matter dictated; 80 on hard matter may represent an ability equal to 100 on easy matter. The important thing is that graduates shall be able to perform stenographic duties satisfactorily. There is evidence that each school gives frequent and regular "speed tests" in shorthand, but there is no evidence that "stenographic work" speed tests are given at any stage in the course. Pupils may write from dictation well and yet be unable to get out a satisfactory volume of work on the machine in a given unit of time. Regular and frequent tests of the kind mentioned above will help produce the desired results. Such a test will include both dictation and transcription, and the time will be kept for the entire job of getting out the transcript. Lost motion, failure to use labor-saving devices on the machine, careless habits, inaccuracy, etc., will in this way be checked up and eliminated.

A dictation test was given to all members of the June, 1921, commercial graduating class in each school. A copy of the material used is shown in Appendix A. A letter consisting of 160 words and an equal amount of solid matter were dictated in four minutes, making a rate of 80 words a minute. This rate was selected because it should be within the range of all members of these classes on the date of the test, April 26th, if they are to reach 100 words a minute by June. In fact, this 80-word rate allowed a margin for the usual nervousness which attends such a test.

The matter dictated was selected from a test given to similar classes in 1919 in all the high school shorthand classes in a neighboring state. It was dictated by the commercial department head, or someone selected by him, in each school. A representative of the State Department was present in each school to make sure that uniform rules were followed. To insure absolute uniformity, the papers were rated by the author of this report, according to a standard system of marking.

An hour and fifteen minutes was allowed for transcription on the typewriter.

The results of the test by schools is shown in the following table:

RESULT OF STENOGRAPHIC TEST IN GIRLS' CLASSES

Standing of Schools.	Schools.	Number.	Average, per cent.	90 to 100, per cent.	80 to 89, per cent.	75 to 79, per cent.	Failures Below 75, per cent.	Number of Zero Papers.
1	B	25	91	84	12	0	4	0
2	D	59	82	46	25	7	22	1
3	A	52	76	19	83	15	33	1
4	E	106	66	34	15	6	45	16
5	C	45	60	20	22	9	49	7
6	F	44	26	2	5	2	91	22
Totals		331	67	34	19	7	40	47

NOTE.—Expressed to the nearest per cent.

On the whole, the results are good. They are of special significance in comparison with the results in the boys' classes shown at page 45 of this report. It is apparent that shorthand cannot be taught satisfactorily in less time than is given to it in the girls' classes—five periods a week through two years. It is equally apparent that, since fully fifty per cent of the errors made by these girls are due to their limited vocabulary, inability to spell, weakness in fundamental grammar, and lack of general information, rather than to faulty shorthand notes, good stenographers cannot be trained successfully earlier than the third and fourth years of the high school course.

The poor showing made in school F is not easy to understand. The following facts may have a bearing on the matter: 1. This is the only school that requires its girls to devote an entire year to algebra. This extra half-year displaces something more valuable from a general education standpoint; 2. In no other school is modern foreign language required of all girls, although in one other school all girls elect it; 3. At least a little special business English is taught in all the other schools and the closest possible coördination between the commercial work and the regular English work is effected; 4. In all the girls' shorthand classes in the separate girls' high schools, much more transcription from notes is required. This undoubtedly is the chief weakness in school F's shorthand program.

In high school E the best pupils were grouped in a single section on the basis of their work in shorthand, typewriting, and English. This section did the entire stenographic test in just one-half the time allowed for it and averaged 92.26 per cent. There was but a single failure. The remainder of the pupils were grouped in two sections and were rated as of equal ability. One of these sections made an average

of 78 per cent on the survey test while the other section made only 27 per cent. The latter section met the first period of the day and "this period has been on an average from 10 to 15 minutes shorter than the other periods." This is significant as showing the impossibility of getting good results in less than the full five periods a week over a period of two years. It is quite possible, however, that there happened to be many in the short period group that should not have elected shorthand as a major vocational study. Since 16 of the 36 stood zero in the test, 14 below 60 per cent, and only two passed, with grades of 77½ per cent and 80 per cent, it is safe to assume that there were many misfits in this group. This merely indicates the need for a broadened program of commercial education to provide vocational business training to meet the requirements of girls whose ability may be equal, but whose aptitudes and interests may be quite different.

By careful study of the girls' records during the first two years in high school, and by suitable preliminary tests, it should be possible to exclude from shorthand those who have no aptitude for it. At the end of the first year of shorthand those who continue in this subject should be classified according to the progress they have made. A reclassification should be made in the middle of the final year if possible.

Typewriting. In all girls' schools this subject is begun in the third year, is taught five periods a week, and is continued through the fourth year. This is in accordance with the best practice so far as those are concerned who complete the fourth year, which is about 20 per cent of those who enter high school. In many junior office positions even a slight amount of skill in this subject is valuable. Therefore, it is best to offer at least one year of it to all commercial pupils earlier in the course. The curriculum given on pages 55-59 provides for this.

Individual records of work done are kept, but there is no uniform practice in this matter. Records kept on charts posted in some conspicuous place would be productive of good results. Pupils are thus stimulated to do their best so as to keep up with the general average of the class.

In all except two schools there is but one make of typewriter in a room. This is desirable. When more than one machine is used in elementary classes, all reference to parts of the machine in teaching must be repeated for each machine. This is confusing to the class. Machines representing the standard makes should be in the office practice or transcription room.

The typewriting desks are unsuitable. They are double desks and each costs at least five or six times as much as two more suitable single desks would cost. They are so arranged that only one of the two

pupils has any place for the copy from which she is writing. One pupil must place her copy back of the other pupil's copy and thus be forced to read at a distance of from 24 to 30 inches. The alternative is to balance it uncertainly on the two-inch edge at the other side of her machine next the aisle and have it knocked off on the floor every time the teacher or a pupil passes through that aisle. Regardless of which side of the machine copy should be placed, only one of the two pupils can place her paper satisfactorily on the proper side. No copyholders can be used to advantage and for this reason girls are forced to read from copy, both notes and type, at such an angle and distance as to cause a very severe eye strain. The "drop leaf" mechanism is unnecessary, expensive, and frequently out of order. The desks are wasteful of space, since they are at least a foot deeper than they need to be. No more desks of this sort should be purchased and those now in use should be replaced as rapidly as circumstances will permit. In the meantime some way should be found, if possible, to relieve the eye strain referred to above.

Keyboard shields are used in but two of the six schools. This is largely a matter of individual preference, but it is quite likely that shields are helpful in fixing proper fingering habits in the early stages of typewriting instruction.

The speed requirement for the first year is about 20 to 25 words a minute; and for the second year about 40 words a minute. In two schools no definite rate is required for graduation. In nearly all schools there is a noticeable indefiniteness about this matter. A definite, realizable standard should be established and maintained.

There is a variety of practices among the different schools and among teachers within the same school, in the matter of requirements as to accuracy. Some teachers require absolute accuracy in every lesson. Others permit a few errors. Still others require a certain number of correct lines of each lesson although they need not be consecutive. Some teachers require pupils to finish the lesson or "page," even though an error has been made that will throw the paper out. Others have pupils write through to the end of lines in which errors have been made. It is bad practice to require a pupil to write more on a line or page without having it count in her favor, as she is bound to hurry through it carelessly when hope of having it accepted is gone. This tends to hinder progress toward correct typewriting technique. The heads of departments and typewriting teachers should get together and after due deliberation establish a definite policy for handling this phase of typewriting work. Requiring three copies of each lesson, one perfect and two with a possible minimum of error, is one good plan. By this method every lesson is written through three times; an error

does not throw the lesson out and thus the pupil continues carefully after making one or two, or even three errors, until two copies of the lesson have been written. The strain caused by the absolute accuracy requirement is removed, and frequently the first copy is the perfect one. Not infrequently pupils turn in three perfect copies.

In some of the schools no one teacher is responsible for the condition of the typewriting room, the machines, the typewriting records, or the final results. It seems to be the best practice in good schools to have each typewriting room in charge of a certain teacher whose job it is to train typists. Under any other plan, typewriting is frequently regarded as an incident only in the training of a shorthand writer. It should be remembered that the greater part of a stenographer's salary is paid for typewriting time; also that shorthand notes may be inaccurate at times, but the typewriting, never. There is no more important job in the commercial department than the training of expert typists. This is work the results of which can be measured easily and accurately. There is diversity enough to keep it from becoming monotonous. The transcription work may or may not be handled by the shorthand teacher. The transcript, however, should go to the shorthand teacher for correction and record.

In a few schools typewriting and shorthand are taught in the same room. In fact this is offered frequently as a reason for having the expensive and unsatisfactory "drop leaf" desks referred to above. This practice is wasteful of equipment as it ties up typewriters for just as many hours as shorthand is taught in a typewriting room. This dual use of the typewriting room is not found in schools in other cities to any extent and therefore it must be perfectly possible to make a schedule so as to prevent it in Philadelphia.

A typewriting test was given the pupils that will finish this subject in June of this year. The test, a copy of which appears in Appendix B, consisted of 210 words to be copied in seven minutes, and a tabulation exercise. The results were very gratifying as the following table indicates:

RESULTS OF TYPEWRITING SPEED AND ACCURACY TEST—GIRLS' SCHOOLS

Standing of Schools.	Schools.	Number.	Average, per cent.	90 to 100, per cent.	80 to 89, per cent.	75 to 79, per cent.	Failures Below 75, per cent.
1	D	68	94	81	16	2	1
2	B	26	92	69	23	8	0
3	C	46	91	74	18	4	4
4	F	45	90	67	24	2	7
5	E	105	88	72	11	2	15
6	A	63	81	59	10	5	26
Totals		353	89	70	17	4	9

RESULTS OF TABULATION TEST—GIRLS' SCHOOLS

Standing of Schools.	Schools.	Average for Test, per cent.	Knew How to Use Tabulating Device in Making Report Required, per cent.	Knew How to Use Tabulating Device in Letter Writing, per cent.
1	D	95	97	93
2	C	84	84	83
3	A	78	78	78
4	B	66	68	64
5	E	55	50	60
6	F	48	51	44
Totals		71	71	70

NOTE.—Expressed to the nearest per cent.

From a study of the table showing the speed and accuracy results it will be seen that all except two schools made an excellent showing. School E made a good showing, while that of School A is not so bad as to call for severe criticism. It is apparent that great emphasis is being placed on the development of speed in typewriting from plain copy.

From a study of the table showing the results of the tabulation test it will be seen that the pupils in Schools B, E, and F are not so familiar with the use of the tabulating device as they should be. It is quite apparent that the pupils in these three schools are being well trained so far as speed and accuracy in typewriting is concerned, but it is not equally apparent that these schools are sufficiently emphasizing collateral work in typewriting.

Office Practice. With but a single exception, provision is made for office training one term in the fourth year. Two periods a week are given to this subject, and the common practice is to have one double period instead of two single periods. This amount of time is wholly inadequate to do more than expose the pupils to a few selected types of office work collateral to stenographic work. In all cases this course is intended merely as auxiliary to shorthand. No attempt is made to give thorough training in calculating machine work, filing, indexing, secretarial work, etc. Insufficient practice is given even to the few things that are taught. The time is too short to do more. The teachers would like more time. The usual practice elsewhere is to give at least 108 hours to this subject as against 36 hours in Philadelphia. The equipment for a proper office training course is incomplete, but for such work as can be done in the time allowed for it here it is probably sufficient.

There should be a well equipped office training department in charge of an experienced teacher in every school. Girls who have no aptitude for, or interest in, shorthand, bookkeeping, or salesmanship, frequently are adapted to other types of office work. Some may become expert figure-workers with calculating machines in statistical or cost

work. Others may train for the management of elaborate filing departments. Still others may be interested in supervision of groups of office machine operators or clerical workers. For this kind of office training, there should be a battery of calculating machines for class instruction and one each of the kinds not used as the basis of instruction, for demonstration purposes. There should be one complete filing and card index unit with the supplies for each section of this unit for demonstration and practice purposes, and an inexpensive file tray for each pupil's use in class work. There should be one each of every piece of office equipment which is in common use for demonstration and instruction purposes. There should be at least three or four copies of the business information books which are found in good offices, such as telephone directory, commercial atlas, mercantile reports, street directory, railroad tariff book, business reports, railroad and hotel guides, postal information guide, etc. All pupils in the upper class should have some of this office training; some pupils should have all of it. For both groups, it should be an intensive, complete, vocational course.

Commercial Geography. This subject is not required in any of the four separate girls' high schools. It is required of all girls in both schools in which boys and girls are instructed. In one of these schools it is scheduled for the fourth year after most of those who should have it are gone, and in the other it is found in the second year, where by common consent it belongs. In one school it is elective in the second half of the second year, with arithmetic as an alternative. This is bad practice if the time is needed for arithmetic. However, in that school many girls, about 30 per cent, who do not take foreign language, get arithmetic an additional half-year. Under this option 40 per cent of the girls get commercial geography. In another school commercial geography is elected by from 45 to 50 per cent of the girls in the last semester of the second year. In a third school, it is taught in the senior year to about one-third of the girls "as economics with emphasis on the United States." This plan is rather vague, and deprives nearly all of the girls of commercial geography. In the fourth school no commercial geography is offered even as an elective.

In several of the schools a specially prepared commercial teacher handles this subject, while in other schools it is handled by a science or a history teacher. Science and history teachers who know much about commerce as well as geography can handle this subject quite as well as anyone else, but in no school should commercial geography be divorced from the commerce department, as it is a valuable and highly specialized unit of preparation for business. The tendency noticed,

to turn this subject over to the science department, is bad practice. It is an important social study and cannot properly be regarded as a science.

Commercial Law. This subject is required of all commercial girls one-half of the fourth year in only two schools. In three schools, it is elective and practically all seniors take it. In one school, it is neither required nor elective. Since the primary objective of most of the senior girls is to become a stenographer, it may be argued that commercial law is a nonessential. Possibly girls require less of it than boys. However, it cannot be questioned that such topics as negotiable paper, agency, sales, partnership, corporations, common carriers, and contracts, should be studied by girls whose ultimate aim is to fill high grade stenographic or secretarial positions. Furthermore, the time has come when women, quite as much as men, need to be familiar with the legal aspects of the common business relations of life. A brief course in this subject should be available to all commercial girls.

Salesmanship. This subject is taught in but one girls' high school; and in this particular school commercial law is ignored entirely and commercial geography is given no consideration. Under these conditions a general course in salesmanship "as an aid to stenography" cannot be justified. It is not likely that what is known as "outside selling positions" should be trained for in the girls' schools. It is quite certain, however, that courses in "retail selling," or "inside salesmanship," should be offered in the third and fourth years as a major vocational course for girls with aptitude for this kind of work. Much evidence has piled up during the past three years to prove that no field of business offers greater opportunities for women than does the retail field as at present organized. In one city five stores employ 450 women in positions the minimum salary for which exceeds that of the highest paid women teachers in that city's public school system. The same situation exists in any large city. A survey should be made in Philadelphia at once to establish a proper coöperative plan for this kind of work. A specially trained teacher should be employed for these classes, and work in stores should be required of all pupils who enroll for retail selling training. In no other phase of business education has there been so great development during the past few years, and Philadelphia should not long remain apathetic to this new need in commercial education.*

* It should be stated that an attempt was made a few years ago to give retail selling training in William Penn High School. The attempt failed because a trained teacher was not employed, the stores had not yet begun to appreciate the need for such training, and instructional content was not available for such courses. In other words Philadelphia was ahead of the times in this particular matter. The obstacles that stood in the way when this experiment was made can and should be overcome in a second attempt to introduce this important type of business training.

Commercial Mathematics. This subject is regarded as of vital importance in a commercial course. Business men complain because commercial graduates cannot perform the simplest arithmetical computations with accuracy and dispatch. There are relatively few office positions that do not require some figure work. Boys and girls, therefore, who are training for office work should develop certain process habits that will enable them to acquit themselves creditably in this kind of work.

To teach commercial arithmetic exactly as it has been taught in the grade school is a useless waste of time. This is not necessarily a criticism of grade school arithmetic. The subject is taught thoroughly enough there, but the drill required to fix process habits in fundamentals is lacking. Facility, and not merely accuracy, is the essence of commercial arithmetic. The primary objective is to train pupils to handle the common office arithmetic effectively. There must be daily rapid calculation drill on entirely new and concrete material if the main purpose of this course is to be achieved. This does not mean that the usual objectives of mathematics instruction are to be ignored.

Many topics now included in the commercial arithmetic course should be eliminated in favor of more intensive work on those retained. In elementary business arithmetic, such subjects as stocks and bonds, foreign exchange, customs duties, involved partnership problems, etc., have no place. These should be reserved for a brief advanced course in the senior year when statistical work can be included.

In all the girls' high schools this subject is taught a half year, four periods a week. It follows a half year of algebra. A half year additional is elective in one or two schools, but little advantage is taken of this option. This is insufficient time in which to do good work. The evidence of this fact is abundant. It is strongly recommended that a composite course, called commercial mathematics, be organized on a five-period-a-week basis for a full year; that rapid calculation work be made a part of every period; and that the advanced phases of the subject be omitted from the first year course.

At present this subject is handled in the general mathematics department. This is very exceptional. Scarcely another city can be found where this is the plan followed. The mathematics teachers do not have proper objectives in teaching this subject and consequently use wrong methods of teaching it. They do not like the subject and accept it as a part of their schedule very reluctantly. As a consequence the commercial arithmetic classes are passed around from teacher to teacher and the results are necessarily very poor. This subject, which represents technical commercial training, should be taught in the commercial department in every school.

A test was given all girls who completed this subject the preceding semester. This test is shown in Appendix C. It consisted of two parts—one a rapid calculation test and the other a business problem test. The former included addition, subtraction, fractions, simple interest, percentage, and maturity date extension. All work was to be mental. The second part included simple interest, trade discount, cash discount, commission, stocks and bonds, and profit and loss, and one denominate number table. The results, after all allowances are made for the usual nervousness which attends a test, were very poor as will be seen from the following table:

RESULTS OF COMMERCIAL ARITHMETIC TEST IN GIRLS' CLASSES

Standing of Schools.	Schools.	Average Per Cent.		
		Both Parts.	Part I, Mental.	Part II. Written.
1	A	37	23	14
2	B	37	22	15
3	C	36	28	8
4	D	25	19	6
5	E	25	21	4
6	F	23	19	4
Totals	.....	31	22	9

NOTE.—Expressed to the nearest per cent.

Business English and Correspondence. Special business English is taught as a part of the commercial course in the fourth year in all but one of these high schools. In no school is this work handled by one teacher who is thoroughly qualified for it, as a permanent part of her work. The business English classes are passed around among the English teachers. This no doubt is good for the teachers, but bad for the pupils. If a teacher with the requisite knowledge of business can be found in the English department, there can be no objection to having this subject handled by such teacher. It is absolutely certain, however, that not all the English teachers in a single school are sufficiently familiar with business to enable them to teach business English and correspondence effectively. Therefore, classes in this subject should not be passed around. A specially trained teacher should be available in each high school for this work. The classes should be given to this teacher who should be held entirely responsible for the results. See page 50 for a more complete statement concerning this course.

General Items. In all the girls' high schools the attitude of the principals toward business education is excellent. They are sympathetic with its aims and earnestly trying to establish proper vocational objectives with effective plans for reaching them. This helpful spirit

on the part of those principals accounts for the greater freedom which the heads of departments have had in organizing their work.

The general atmosphere of the girls' commercial departments is good. Teachers are businesslike and the daily work is conducted along up-to-date business lines. No more earnest, hard-working teachers and pupils can be found anywhere.

Boys' High Schools.—General Statement. As was stated on page 28, there are very significant differences between the commercial work for boys and that for girls. This is as it should be. However, the general aims and objectives so far as the immediate future of boys and girls are concerned, are much the same. There should be definite vocational objectives toward which high school commercial boys are working. To be sure there is much merit in the argument that with boys, the more remote goal is relatively more important than the immediate position which may be available at the end of the course. At the same time adequate preparation for the immediate position is absolutely essential to the ultimate achievement of the more remote goal. For example, the boy who aims to become a high grade accountant must first become a first-class bookkeeper. The one who expects to become a court or general reporter must first qualify as a stenographer. The one who aspires to an executive position and expects to reach such a position through the stenographic or secretarial route, must be thoroughly trained for his initial job.

Promotion comes only to those who do their immediate tasks well; therefore, the best way to insure future progress is to fit a boy to do his initial work better than it has ever been done before, to inspire in him a desire to get ahead, and to give him the best possible general background education that can be given him under the conditions of his training. It is useless, however, to try to crowd into a high school curriculum a full general education and a complete business training. That this cannot be done need cause us no uneasiness, since even formal educational opportunity no longer ends with high school graduation. Extension training may be had in evening schools, continuation schools, Y. M. C. A., and other similar schools, university extension departments, correspondence schools, and corporation schools.

The boys' high school commercial departments are dominated almost completely by the formal college preparatory objective; at least so far as the course of study is concerned. It is true, however, that some of the heads of departments and teachers emphatically insist that their training is definitely vocational. Practically all the courses in these schools belie the expressed intent. In this connection it should be stated that the Wharton School alone is referred to by Philadelphia

people when college entrance is mentioned. The way is kept open for college entrance at the expense of the 90 per cent or more who do not go to college, in spite of the fact that relatively few do go to college on an all-day basis.

It should also be emphasized that a high school business course that definitely trains for business does not necessarily bar boys who take it from going to college for advanced courses in commerce, accounts, and finance. A number of reputable colleges accept for collegiate commerce work graduates of any four-year course.

One-third of the boys' high school entering classes enroll for the commercial course. They get no business work of any consequence in the first year. Thus it will be seen that the 40 per cent who drop out at the end of this year, go to work without any special training or go to private business schools to get what they failed to get in the public high schools. Those who drop out at the end of the second year are but little better off. The whole program should be reconstructed with the one-year, two-year, and three-year, as well as the four-year, boys in mind. A suggestive unit-year program is presented on pages 58, 59 of this report. Such a program, while preserving basic educational content, provides vocational training that fits for employment.

The following table shows the mortality of the classes which graduated in June, 1920. Partial figures available for the class of 1916 show similar conditions for that year:

MORTALITY TABLE—BOYS

Schools.	June, 1920, Commercial Class.									
	Entered September, 1916.		Present September, 1917.		Present September, 1918.		Present September, 1919.		Graduated September. 1920.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
G.....	113	..	77	68	33	29	18	16	13	12
H.....	97	..	83	86	36	37	28	29	24	25
L.....	199	..	75	38	29	15	22	11	20	10
I.....	178	..	55	31	32	18	29	16	28	16
K.....	99	..	33	33	17	17	11	11	11	11
J.....	58	..	49	84	27	47	14	24	9	16

NOTE.—To nearest per cent only.

Foreign Language. One foreign language is required in three of the six boys' schools. In one school, four years of one language and two of another are required. In the remaining two a foreign language is not required, but all boys elect it. It is apparent that in these two schools there is sufficient influence brought to bear on the pupils to overcome the "free elective" provision for this subject.

The smattering of foreign language which is obtained by the

very large proportion of boys who remain but one or two years is of questionable value as compared with that of other academic and commercial subjects. In the interest, both of better general education and of business training, it should cease to be a requirement of all.*

Commercial Subjects.—Business Writing. Every commercial boy should be taught to write well. For the most part this is not being done in the boys' high schools. The time devoted to this subject varies from two periods a week for a year, to four periods a week for the same time. In one school it is taught four periods a week for a semester. Good results cannot be obtained on a two-period-a-week basis. It is a facility subject and requires continuity in instruction and practice. A shorter daily period would be better.

Elements of Business. This subject, which is scheduled in the "Uniform Course of Study" is given by only one boys' school. In this one school the objective is stated as follows: "To teach letter writing and prepare for shorthand." The subject is therefore really a camouflaged business correspondence. It cannot be justified for this purpose. Letter writing should be taken care of in the regular English and special business English classes.

Unless a definite "Junior Business Training" course as a forerunner to bookkeeping, as a vocational preparation for those who drop out, and as a try-out program upon which to base later vocational selections for those who remain, can be developed and offered in the first year, the boys' schools are wise in omitting this rather vague course as it is at present organized.

Bookkeeping. In all but one school this subject begins the first year. In the remaining school it is not begun until the first semester of the third year. In this school it is taken but three semesters, although a course called elementary accounting is scheduled for a fourth semester. This work can be no more than advanced bookkeeping, since three semesters are inadequate to reach an accountancy stage in this important subject. In all the other schools three years of bookkeeping are taken by practically all boys who remain to finish the course. In one of these schools the third year is elective, but two-thirds of those who remain to graduate take it. In another, only two periods are scheduled for the third year.

In most schools four periods a week are given to this subject, but these four periods are taken in two double periods rather than in four single periods. This amount of time is at least 25 per cent less than is given to this subject in most city high schools. Furthermore, it is

* See Addenda.

apparent that by the two-day-a-week plan the work lacks that continuity so essential to sustained interest. Certain subsidiary subjects may be handled satisfactorily on this basis, but an important subject, such as bookkeeping is, in a business course requires at least five periods a week for the reaping of its full values. Double periods without homework in the first year are to be preferred for obvious reasons. Very little effective homework can be done in this subject at the outset, and as at present organized the credit given the subject is out of proportion to its demand upon the pupil. The credit should not be reduced, but the time should be extended to insure a better piece of work.

The individual and class methods are both used to advantage. The daily double period suggested above would permit of a better balance between these two features of instruction and permit proper coördination between business writing and bookkeeping, since the first twenty minutes could be devoted to a penmanship lesson, the second twenty minutes to class instruction in bookkeeping, and the remaining forty minutes to laboratory work and individual instruction. Few pupils have facilities at home for doing effective bookkeeping work.

Shorthand. This subject is offered in all boys' schools. Except in one school, all take it. In that one it has been reorganized recently on a third and fourth year basis and there is no senior class in it at the present time. Moreover, it is elective and none elected it this year. Hence there are but few pupils in this subject in this particular school, and its work could not be tested with that of the others.

In three schools shorthand is taught five periods a week during the third and fourth years, the same as in the girls' schools. In one of these schools, however, the change from a three-period-a-week plan has recently been made so that the senior class was taught on the old basis. One school requires it 2½ periods a week the second year, three periods a week the third year, and four periods a week the fourth year. Another gives it four periods a week the second year, two periods a week the third year, and one period a week the fourth year. Thus it will be seen that there is a wide range of practice in this subject.

It should be emphasized that shorthand is a vocational subject, which must be taken by those who would become stenographers, but *not necessarily by those who aim at some other business vocation.* A business education may be complete without it. Moreover, to do superior stenographic work requires special aptitudes, manual and mental alertness, a mastery of grammar, a good general education, and reasonable maturity. Not all boys will qualify for this work.

It should be emphasized also that, while mediocre girl stenographers may secure mediocre stenographic positions suited to their limited

abilities, there is absolutely no vocational outlet through stenography for mediocre boy stenographers. Boys are wanted by executives frequently for stenographic work, but such positions make extreme demands on their ability as stenographers. Those boys who have aptitude and interest in this direction should be encouraged to study shorthand and given time to master it. Court reporting and general reporting represent to qualified male stenographic writers a professional opportunity second to none. More such material should be discovered and developed in our boys' high schools.

It is apparent, therefore, that for some boys at least, shorthand should still be taught on a vocational basis. This cannot be done on a time basis less than five periods a week for two years. Those schools that are attempting to train efficient shorthand writers in less time are failing.

In some schools rather vague, non-vocational objectives were hinted at. However, it is very clear that the teachers in charge of the classes are thinking in terms of vocational stenographic skill. Given sufficient time for the job they will develop some good stenographic writers, but at present the cards are stacked against them. If it is the aim in any boys' school to give boys merely a little general knowledge of shorthand and an elementary "note-making" skill in this subject, far less time than is now given to the subject will suffice. An intensive course of one term will produce results quite satisfactory for this purpose and in many cases superior to those being obtained under the present "occasional lesson" plan. In other words, for boys, the job is worth doing exceptionally well or it is not worth doing at all.

The same test that was given the girls was given the boys on the same day and under exactly the same conditions. The following table indicates the results in the boys' schools:

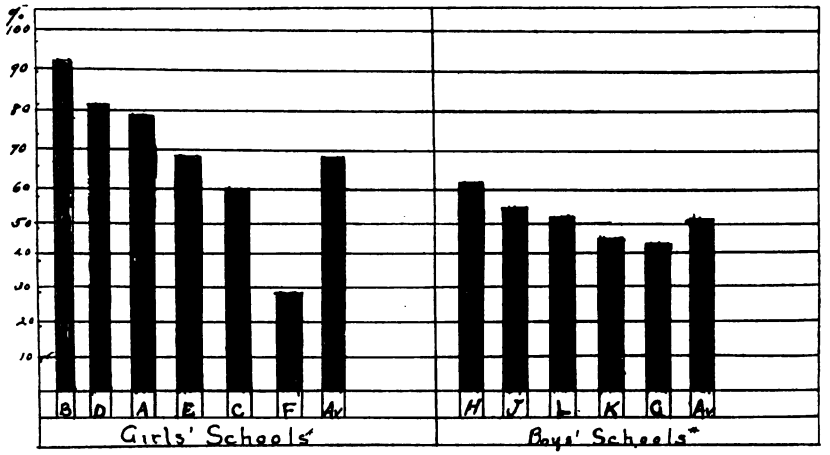
RESULTS OF STENOGRAPHIC TEST IN BOYS' SCHOOLS

Standing of Schools.	Schools.	Number.	Average, per cent.	90 to 100, per cent.	80 to 89, per cent.	75 to 79, per cent.	Failures Below 75, per cent.	Number of Zero Papers.
1	H	25	61	12	20	8	60	0
2	J	14	55	14	14	8	64	2
3	L	23	53	4	22	4	70	3
4	K	13	44	0	8	8	84	4
5	G	23	42	13	13	..	74	10
Totals	.....	98	51	9	15	6	70	19

NOTE.—To nearest per cent.

* One school had no class to test.

The following graph shows the striking contrast between the girls' and boys' schools in this subject:



* Including classes in schools that have both boys and girls.

It is not altogether easy to account for the results in this test. The work in the three schools that give wholly inadequate time to this subject is about what one would expect. However, the two schools that give the subject as much time as the girls, fall far below all but one of the girls' schools. The one fact stands out—that the boys show little prospect of making a commercial rate of speed with the required degree of accuracy by graduation day.

It is recommended that the whole question of shorthand for boys, including whether or not it shall be required or elective, what shall be the objectives, how much time shall be given to it, what graduation standard shall be established, and what methods will best meet the requirements of such classes, be carefully considered by the heads of departments in the boys' schools working as a committee for this purpose.

Typewriting. This subject is fully discussed on pp. 33-36 of this report and all that is said on those pages applies to the boys' schools, in so far as the aim is to prepare boys to do efficient typewriting work. Those who are permitted to take shorthand with a view to becoming proficient in its use, should be expected to become proficient typists. The best methods must be used and sufficient time must be available to produce good typists.

The test which was given to both boys and girls* produced the following results:

* See Appendix C.

RESULTS OF TYPEWRITING SPEED AND ACCURACY TEST IN BOYS'* CLASSES

Standing of Schools.	Schools.	Number.	Average. per cent.	90 to 100, per cent.	80 to 89, per cent.	75 to 79, per cent.	Failures Below 75, per cent.
1	J	13	92	77	8	8	7
2	K	13	85	46	38	8	8
3	H	25	78	36	20	8	36
4	G	22	69	23	36	9	32
5	L	23	49	9	4	9	78
Totals	.....	96	75	38	21	8	32

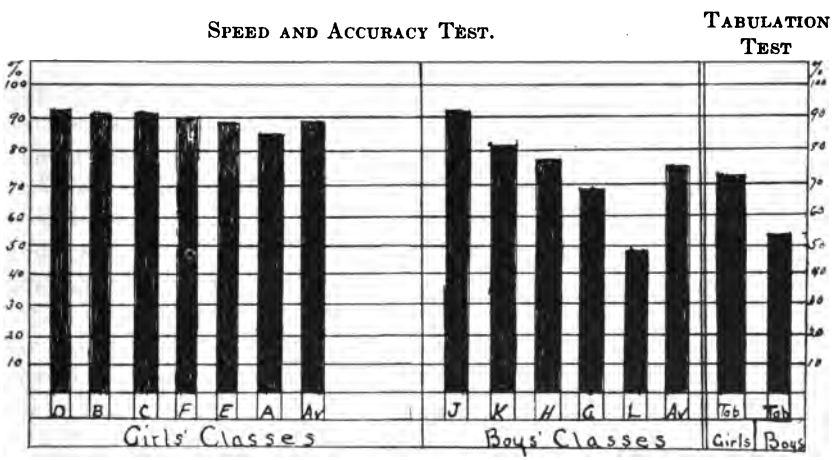
NOTE.—To nearest per cent.

RESULTS OF TABULATION TEST IN BOYS' CLASSES†

Standing of Schools.	Schools.	Average for Test, per cent.	Knew How to Use Tabulating Device in Making Report Required, per cent.	Knew How to Use Tabulating Device in Letter Writing, per cent.
1	K	77	77	77
2	G	63	70	55
3	J	50	50	50
4	L	44	57	30
5	H	34	36	32
Totals	.....	54	58	49

NOTE.—To nearest per cent.

The following graph shows the comparison between boys' and girls' work in typewriting:



* One school had no advanced class in typewriting.
† One school had no advanced class.

Wholly inadequate time is allowed for this subject in the fifth school in the list—two periods a week the second and third years and one period a week the fourth year. This is largely a waste of time. More time, or none should be given this subject in this school.

In all the boys' schools, with possibly one exception, there is nothing to show that the "touch method" is taught. This method is now universally used in schools that teach typewriting. Very few boys in the above groups can write by touch. In the schools that stood highest the boys wrote at a rate of speed higher than was required by the test, but inaccuracy, due largely to faulty technique, brought their marks down.

In several schools several grades of pupils are scheduled in the same room at the same time. This practically eliminates class instruction, without which there can be no effective teaching of this subject. The teachers appreciate this fact. The practice should be discontinued.

A tabulation test was given, but relatively few pupils in these groups have received sufficient instruction and practice on the use of the tabulator device to use it and intelligently tell how they did it. With proper time allowance and classroom conditions, more can be done with collateral typewriting work.

Office Practice. Four of the six schools devote no time to this subject. One school teaches the adding machine, mimeograph, filing, etc., in the bookkeeping classes of the third year. Since there are but four periods a week for bookkeeping in this year, it is obvious that even these few phases of office practice can receive only incidental attention. In the remaining school a little office practice is given in the typewriting classes. This work includes only those phases of office work that involve the use of the typewriter and can scarcely be regarded as anything more than advanced typewriting.

Boys, like girls, enter business as office workers. They need greater familiarity with office routine and procedure than can be acquired in the commercial subjects which now make up the commercial curriculum. If boys are to be trained for high grade stenographic work, they will need special stenographic office training. If they are to be trained for any other kind of office work as an introduction to business, they still need training in office systems, filing, office machine work, shipping and receiving practice, stock room work, etc.

A well organized office training course should be worked out on the basis of boys' needs and introduced into the latter part of the curricula on a time and credit basis that will insure its benefits to all commercial boys.

Commercial Geography. This subject is properly required in five of the boys' schools. In the remaining one it is elective. It is given a

full year in all but one school. In this one school it is given a half year. In all but one it is given in the second year, while in one school it runs through the second half of the second year and the first half of the third year. It is handled by a member of the commercial faculty in five schools; by a science teacher in one school. In all but one school there is a good collection of commercial materials. Some of these collections are not well organized, however, and therefore are but little used. In one school, they are used constantly and the work is far above the average.

Objectives are not well defined in all schools. In some of them, however, aims and purposes seem to be clearly thought out. In one school, particularly, the "lecture" evil is interfering with progress. In this school the greater part of a period was devoted to a lecture on the "Superiority of Highland People over Lowland People." The assignment for this class of second-year boys was on the subject of railroads. Each boy was allowed to choose a state, country, or continent whose railroad system he was to chart on a map and describe. The boy who drew Europe had quite a job on his hands. His seatmate drew Pennsylvania, while others were given Africa, Asia, Japan, Australia, etc. There seemed to be no definite, well-thought-out plan of which this assignment was a part. The commercial geography course should be brought down to the level of second-year boys in this school, and college methods should be discarded.

Commercial Law. This subject is required in all schools. It is given four periods a week for one semester of the fourth year in most of the schools. In one it is given two periods a week for a year. The subject is well taught. In several schools the teacher is a member of the bar. Boys receive most benefit from this subject and the boys' schools are sufficiently stressing it in their courses.

Commercial Mathematics. The general statement on page 39 concerning this subject applies with equal force to the boys' schools and need not be repeated here.

In all schools a half year of this subject is required. In two of these schools an additional half year may be elected. This option is not taken advantage of since the curriculum in each school is already crowded. A year of the course called commercial mathematics in an earlier part of this report should be required in the boys' schools.

The objectives in the minds of the teachers are not well defined. Very little difference between grammar school arithmetic and what is offered here as commercial arithmetic can be noted. The results, therefore, are very poor when viewed from the standpoint of business training, as the test results clearly show.

RESULTS OF COMMERCIAL ARITHMETIC TEST IN BOYS' CLASSES

Standing of Schools.	Schools.	Average, per cent.		
		Both Parts.	Part I, Mental.	Part II, Written.
1	I	55	32	23
2	L	48	29	19
3	K	38	27	11
4	H	31	19	12
5	J	27	20	7
6	G	26	20	6
Totals	.....	38	25	13

NOTE.—To nearest per cent.

In two of the boys' schools this work is handled by teachers in the mathematics department. These teachers not only lack preparation for this subject, but lack interest in it. Consequently, as in the girls' schools, it is passed around and reluctantly accepted. No good results can be secured under this plan. Trained teachers should handle commercial arithmetic as a part of the technical business training of boys, and the head of the commercial department should be held responsible for results. As was previously stated, it is nearly as bad to pass this subject around among commercial teachers merely "to fill out a teacher's program" as it is to rotate it through the mathematics faculty. In the three boys' schools where it is handled in the commercial department it has been given to many different teachers whose primary interests are centered in other subjects. In one of these schools only two periods a week for a half a year are given to it. In this same school algebra is required four hours a week a full year. In another school it is handled by a teacher whose only experience in this field has been in grammar schools and who has no definite idea of the special phases of arithmetic that should be stressed in a commercial class. In the third school, "an inexperienced beginner" handled the classes that were tested. The results speak for themselves.

Insufficient drill on rapid calculations is apparent. It is not contended that a wide range of short methods should be taught, or that a wizard-like skill should be developed. It is contended, however, that boys and girls should be able to handle a test such as was given in connection with this survey with reasonable speed and accuracy. Daily drill is the only method of producing the desired result.

Business English and Correspondence. In the fourth year a full year of special business English and correspondence should replace the regular fourth year English. This does not mean that the English used by business men should be different from that used by others. It simply means that the content of the fourth year English work for

commercial pupils should be adapted to business requirements and the practical objectives which stand out in the minds of commercial pupils. There should be instruction in the more advanced phases of business letter writing; in the writing of effective advertising literature; in the preparation of business reports; in the writing of accurate, but brief, business records in connection with accounting and auditing work; and in many other forms of business composition.

In this course special emphasis should be placed on spoken English. Reports to superiors, giving directions to assistants, discussions with associates on business topics, sales talks, business conference speeches, committee discussion, etc., should be featured.

Some of the time devoted to literature in this year should be given to the study of the literature of commerce and industry including the best biographical books.

It is evident that specially trained teachers should handle this work. While the teacher of advanced business English and correspondence must know the subject of English, a thorough business training is also an essential part of his preparation for teaching this subject. There must be a close coördination of this work with other courses in the senior year of the commercial curriculum.

Salesmanship. This subject is not taught in any school as a formal subject. Occasional lessons in it are given on shorthand and bookkeeping time in one school. Doubtless this subject would be of value to some of the senior boys, especially if those who take it could be connected with a business firm on a part-time basis. Those who have aptitude for selling should be encouraged to train for and enter this field. Part-time courses are essential to success in this subject, however. Those who are inclined to believe that for boys the general business training and educational values of a commercial course are of primary importance would do well to consider the enrichment of their courses by the introduction of salesmanship, and other advanced business courses, such as advertising, business organization and management, and office organization. These courses are at present crowded out by academic requirements. A course in banking and finance is offered in four schools in the senior year.

Attitude of Principals. The attitude of the principals of these schools, toward commercial work, with possibly two exceptions, is lacking in that aggressive and sympathetic interest so prevalent elsewhere. It still seems to be true that the college preparatory department receives most consideration. Furthermore, the 80 per cent that do not remain to graduate, figure very little in the development of the commercial curriculum.

Suggestions Common to Boys' and Girls' High Schools.—Part-time Classes. No part-time, or coöperative, high school commercial classes are being conducted in Philadelphia. Considerable progress is being made in other cities along this line and it is quite possible that such classes could be organized to advantage in Philadelphia schools. This whole question should be investigated before any definite steps are taken to establish such courses. If this plan is followed, the chance of making mistakes in the development of a part-time plan will be reduced to a minimum.

Difference between Commercial Departments and Other Departments. The commercial department, representing as it does the entire program of large groups of students, bears little resemblance to the other departments which in the average high school are concerned with but single subjects, or at most a group of three or four subjects. The foreign language department head, for example, is chiefly concerned with the teaching of foreign language as a part of a complete high school course of study. He is not concerned with what other departments do. If the pupil does satisfactory work for him, his responsibility is fully satisfied, regardless of what he may do in other subjects. With the commercial department head, it is quite different. He is responsible for a finished product—a trained office worker—who has the necessary technical skill for immediate tasks and general ability to grow into more important work. He must be concerned about every phase of the work, both technical and academic. He is also responsible for satisfactory placement at the end of the course and the success of the pupil in the job obtained for him. It should be apparent, therefore, that since the commercial department head is responsible for the training, placement and ultimate vocational success of his pupils, he, with the aid of the principal, should determine the content, arrangement, and general sequence of the commercial curriculum. The present practice, which is prevalent in many of the schools, of permitting other department heads to cast the deciding vote when questions affecting the content of the commercial curriculum are up for decision should be abandoned.

Teachers' Examinations in Groups of Commercial Subjects. Under the present examination system there is a tendency for persons interested in getting into high school work to make rather superficial preparation for one or two subjects and enter the examination for those subjects. Once on the list, appointment is quite sure to follow. Once appointed, the exigencies of roster-making inevitably, sooner or later, force the scheduling of such a teacher for subjects other than those for which he made his hurried preparation. As soon as possible, the

practice of holding special examinations in certain subjects should be discontinued in favor of more thorough examinations in a larger group of commercial subjects.

Attendance at Commercial Education Meetings. All teachers should be permitted and encouraged to attend at least one important commercial education meeting outside the city every year without loss of salary.

Professional Reading. From the statements of the commercial teachers themselves it is apparent that too few read the professional periodical literature in their special field. A way should be found to stimulate professional interest in current literature on commercial education. In many cases heavy schedules and participation in school activities other than those of the classroom account for this situation. The remedy is obvious.

Department Records. No satisfactory department records are kept in the commercial department offices of these schools. In one school, special records are just being provided for. In addition to classroom records, it is highly important that personality records, school activities records, business experience records, placement records, and follow-up records be kept for future reference and for comparative purposes. If a department of business education is created with a full-time director, there will be a central clearing house for all this information.

Quality of Supplies. It should be emphasized also that the quality of supplies needed to give effective business training must be left to the department head. Not too expensive, but reasonably good typewriting paper, for example, is indispensable to good work in this subject. The newsprint paper issued to commercial department heads the past semester, represents educational waste that far outweighs the slight monetary saving. The typewriter keys become clogged daily, and pupils and teachers finally give up trying to keep the machines in condition. Bits of soft paper fill all the working parts of the machine before such paper has been used a week. There is a reason for double-sheet bookkeeping paper in bookkeeping classes. Such paper was ordered by several departments. The cheaper, but comparatively useless single-sheet paper was substituted by someone with a false notion of economy. The commercial department heads will order only what they need and their requisitions should be approved and filled as written.

Note on Suggested High School Commercial Curriculum. Since junior high schools are being established in Philadelphia at the present

time, it has been thought best to make all commercial curriculum suggestions at the end of the discussion of Commercial Education in the Junior High School, in which commercial education in the junior high school is discussed. By doing so it will be possible to show the articulation between the commercial work in the junior high school and that in the senior high school. A senior high school program built on the unit-year idea is also shown after the junior-senior high school program. Therefore, readers are referred to pages 55-59 for suggestions concerning commercial curriculums for both the junior and senior high schools.

Commercial Education in the Junior High School.—An Immediate Problem. As yet only one junior high school has been organized in Philadelphia. No business training is offered in that one. More such schools will follow soon. Since the junior high school program covers the school years seven, eight, and nine, it is bound to include a limited amount of junior or basic commercial work for those who will not go beyond this school. The great danger is that in meeting the certain demand for some vocational training in this early period, the common error of forcing advanced commercial work downward into this school will be made. This would be worse than to ignore the demand entirely.

There should be no differentiation, whatever, in the seventh year, but in the eighth and ninth years a small amount of junior commercial work may serve as vocational training for those who will leave at the end of the junior high school course; as try-out or "exploratory" courses for those who go on to the senior high school; and as motivating aids for stimulating interest in such fundamentals as writing, arithmetic, English, and geography.

Junior High School Curriculum Suggestions. Since the junior business occupations open to boys and girls under eighteen years of age are more or less general in their character, the training for these positions need not be highly specialized or very extensive in scope up to the end of the tenth year. In the eleventh and twelfth years, as argued elsewhere in this report, there should be such differentiation as local needs indicate and local educational conditions permit.

Seventh Year and First Semester of Eighth Year. The first half of the junior high school period is the preliminary or try-out period for all junior high school pupils. So far as formal vocational commercial education is concerned, there should be no differentiation until the beginning of the second half of the period covered by the junior high shcool. During the first year and a half, every pupil should be studied

to discover special aptitudes, interests, and latent possibilities. Home environment should be investigated. The pupil's vocational knowledge should be extended by personal conferences, general lectures, directed reading, and visits to schools, stores, offices, and factories. At the end of the first semester of the eighth year, pupils should be permitted to elect one of the usual lines of work provided in the junior high school—Academic, Commercial, Home Economics, Industrial, and Agricultural. This election should not be considered irrevocable. The opportunities for cross-overs should be kept open as long as possible by the adoption of a broad program of studies in both the junior and senior schools. Wherever necessary the senior high school curriculum should be modified to meet the requirements of the junior high school program. In no case should the junior high school program be modified to meet the unreasonable requirements of a rigid senior high school curriculum.

The work of the seventh year and of the first half of the eighth year will be the same for all pupils. During the first half of the eighth year all pupils should be required to devote three hours a week to a junior business training course as a sampling course and to insure familiarity with the rudimentary principles of business.

Eighth Year—Second Semester. The curriculum outlined below indicates in a general way what those who elect the commercial work at the beginning of the second semester of the eighth year will take during the remainder of the junior high school period. This curriculum will be both basic for more advanced commercial work and vocational for those who seek employment at the end of this year's work. Furthermore, it is based on the actual needs of such children as take it, and is not too advanced for their comprehension. It may not fit them for the kinds of positions they have been made to believe that they can fill, but it will fit them for the kinds of work which surveys have shown they can get to do. Better still, it reveals to eighth grade boys and girls the fact that by remaining in school for more advanced business training for which their eighth grade work has been a preparation, they can enter business on a much higher plane and with far greater assurance of ultimate success. Thus, while not aiming at reduced school mortality alone, this program tends to encourage pupils to remain in school.

Subjects	Eighth Year—Second Semester	Periods* a Week
English.—With special emphasis on word study, punctuation, capitalization, paragraphing, syllabication, parts of speech, simple sentence structure, simple business letter writing, use of simple oral English, etc. Plenty of habit-forming drill		4

* Sixty minutes.

Subjects	Periods* a Week
Social Studies	3
Geography and Science	2
Elementary Commercial Geography	4
Commercial Mathematics.—Including such of the fundamental ideas of the general mathematics course recommended in the mathematics survey as there may be time for	
Business Writing.—20 minutes daily.	
Junior Business Training and Vocational Knowledge.—With special emphasis on those duties which junior clerical workers are called upon to perform. Unit courses of from one to four weeks each should be built up around the following positions: Messenger, mail clerk, file clerk, receiving clerk, stock clerk, shipping clerk, cashier, office machine operator, entry clerk, order clerk, billing clerk, timekeeper, and pay roll clerk. Instruction in theory should be followed by ample practice in the actual work of these positions. All of these unit courses should be regarded not only as junior vocational training, but as try-outs of a more definite character, and also as vocational guidance courses. For those who remain for the senior high school course these try-out courses will be invaluable as they will reveal which particular line in a differentiated senior commercial program each pupil should follow. 40 minutes daily	5
Industrial Arts or Agriculture or Home Economics	2
Guidance.—A course which should be given to all pupils in the school. It should include both educational and vocational guidance	1

Ninth Year.

English	5
*Economic Civics**	4
Commercial Mathematics.—20 minutes daily	5
Typewriting.—40 minutes daily	5
Bookkeeping I.—40 minutes daily	
Business Writing.—20 minutes daily as long as is required to fix a good business hand	

It is assumed that whatever general provision for physical education, health education, music, art, and school activities is made for the school as a whole will apply to commercial pupils.

Senior High School Curriculum.—Tenth Year

Subjects	Periods* a Week
English	5
European History	5
Bookkeeping II	5
ELECTIVES (choose one).	
Shorthand.—It is apparent that shorthand should not be taught as a vocational subject prior to the tenth year. It is by no means equally apparent that it	

* Because of the large amount of social studies content in the commercial curriculum, general science may be substituted for economic civics this year.

* Forty-five minutes.

Periods* a Week

should, in every case, be deferred until the eleventh year. By starting shorthand in the tenth year it will be possible to articulate the elementary typewriting work with the advanced typewriting work more easily; it will enable teachers to complete the principles of shorthand and develop a commercial rate of speed at the end of the eleventh year, which will permit the establishment of part-time, or coöperative, courses in the twelfth year without interfering with advanced shorthand instruction; and it will make it possible to offer a complete office practice course in the twelfth year. When shorthand is taught in the eleventh and twelfth years only, it is not possible to round out the stenographic course with the necessary office training to enable the pupil to acquit himself to the best advantage in his initial position. For these reasons, shorthand should be offered in the tenth year to pupils who are likely to continue to the end of the full curriculum. It should be understood that if shorthand is included in the tenth year of the curriculum, typewriting will be taken as an unprepared subject at the same time..... 5

*Typewriting II** (unprepared)..... 5

Foreign Language..... 5

Commercial and Economic Geography..... 5

Eleventh Year

At this point differentiation according to the aptitudes and interests of the students concerned should be possible. It should be remembered, however, that only the larger schools will find a differentiation in the upper years possible. No school should attempt any commercial work for which it has no well qualified teachers.

General Business and Accounting		Stenographic		Retail Selling†	
English	5	English	5	English	5
American History	5	American History	5	American History	5
Electives (choose two).		Shorthand I or II‡	5	Store System and Merchandise	5
Office Practice and Machines	5	Transcription§ or Typewriting II	5	One elective.	
Commercial and Economic Geography	5	One Elective.		Commercial and Economic Geography	5
Bookkeeping III	5	Commercial and Economic Geography	5	Business Organization and Management	5
Business Organization and Management	5	Business Organization and Management	5	Science	5
Science	5	Science	5		
Mathematics	5				

* Should be taken as an extra "unprepared" subject if shorthand is elected.

† Actual store practice on a part-time basis is necessary in this course.

‡ See statement regarding shorthand, above.

§ Transcription as a part of homework for Shorthand II three periods a week, or as Typewriting II five periods a week if Shorthand is begun this year.

Twelfth Year

General Business and Accounting	Stenographic	Retail Selling
Business English and Correspondenc 5	Business English and Correspondence.... 5	Business English and Correspondence.... 5
Commercial Law ½ year.	Commercial Law ½ year.	Commercial Law ½ year.
Economics of Business ½ year*..... 5	Economics of Business ½ year.*	Economics of Business ½ year*..... 5
Electives (choose 10 periods).	Office Practice and Machines..... 5	Salesmanship and Merchandise..... 5
Elementary Accounting 5	Electives (5 periods a week).	Store Practice and retail Store Organization..... 5
Advertising and Salesmanship..... 3	Shorthand II (if begun eleventh year)..... 5	
Advanced Commercial Mathematics..... 2	Office Management... 2	
Banking and Finance. 3	Advertising and Salesmanship..... 3	
Office Management... 2		

NOTE.—It is assumed that whatever general provision is made for health education will be applicable to commercial students in addition to the above program. It should be remembered also that one year of science is required.

A Four-Year High School Commercial Curriculum. In high schools where the older form of organization prevails, a slight modification of the commercial curriculum given for the junior and senior high schools will be necessary. The following outline will indicate the curriculum that is recommended. In setting up this program the part that should be taught in the small high school, as well as in the large high school, is *in italics*. Also the required academic work is indicated in the same way. In selecting additional subjects to complete the curriculum, care should be taken to see that only those subjects are chosen for which there is a qualified teacher.

First Year (Ninth)

	Periods† a Week
English	5
Social Studies	4
General Science	5
Business Mathematics.—30 minutes daily	10
Junior Business Training.—40 minutes daily	
Business Writing.—20 minutes daily	
Typewriting	5

* Where a qualified teacher for Economics of Business is not available, a half year of Problems of Democracy may be substituted.

† Forty-five minutes.

Second Year (Tenth)

	Periods a Week
English	5
European History	5
Bookkeeping I	5
ELECTIVES (choose one).	
Shorthand I. (See statement, pp. 56, 57	5
Typewriting II (unprepared). (See footnote, page 57	5
Commercial and Economic Geography	5

Third Year (Eleventh)

English	5
American History	5
ELECTIVES (choose two).	
Shorthand I (if not begun second year)	5
Shorthand II (if begun second year)	
Typewriting II (if Shorthand I is taken this year)	5
Office Practice and Machines	5
Commercial and Economic Geography	5
Store System and Merchandise	5
Bookeeping II	5
Business Organization and Management	5
Commercial Art	5
Science	5

Fourth Year (Twelfth)

Business English and Correspondence	5
Commercial Law—First Semester	5
Economics of Business—Second Semester	
ELECTIVES (choose 10 periods).	
Shorthand II (if begun the third year)	5
Office Practice and Transcription	5
Secretarial Practice	5
Bookkeeping III	5
Advertising and Salesmanship	3
Office Management	2
Store Practice and Store Mathematics	5
Retail Salesmanship and Merchandise	5
Commercial Art and Design	10
Banking and Finance	3
Advanced Commercial Arithmetic	2

The Unit-year Plan. It is of the utmost importance that the full four-year program should not be regarded as a single curriculum. Each year should be regarded as a short, intensive curriculum. Each pupil should be urged to take as many of these units as possible and it should be emphasized that the completion of all the units is essential to a well-rounded high school business training. It is contended,

however, that the first unit alone represents the best possible business training that can be given to one who has but a single year to devote to preparation for commercial employment; that the first and second units represent the best business training that can be given in two years; and that the first, second, and third units constitute a three-year program suitable for those who can devote not more than that amount of time to their formal education.

It is suggested that to attempt to sell a four-year commercial curriculum to a boy who has an idea that he wants to go to work at the end of a year is not the surest way to get him into the high school, or to hold him there. The one-year private business school curriculum is available to him, and he is unwilling to think in terms of more extensive business training. To sell him the first unit of a possible four-year program is the surest way of enrolling him in the high school and holding him to a time when he can be sold the second unit of the full articulated unit-year program. It is always easier to get both pupil and parent to see one year ahead, than it is to get them to see four years ahead. By seeing a year ahead at a time, they may be led ultimately to see the larger goal at the end of the four-year curriculum.

Commercial Education in the Evening Schools.—Importance. About 26 per cent of all pupils enrolled in the evening schools of Philadelphia are in the commercial department. The total number of such pupils is 3179.* They have enrolled in evening school commercial classes to secure special preparation for advancement in their daily work. There is very little difference between the groups in the different schools, and very little difference between the work of any one school and that of the others. It is all of the traditional day-school type.

Extension Character of Training. Evening school courses in any commercial department should be more largely extension work. That is, they should be planned with reference to the needs of employed people who enroll in evening school to secure training for advancement. Those who are employed as "extra clerks" may desire bookkeeping to prepare for advancement to assistant bookkeeper, but those who are now "cost clerks" may prefer special cost accounting work. Those who are employed as typists may need a dictaphone course to qualify for promotion to a position as dictaphone operator. Those who are doing a little stenographic work with inadequate preparation for a full stenographic position, may wish to have their knowledge of shorthand extended by evening school courses. Likewise those who are in credit departments will seek training that looks toward promotion to "credit man." Advertising clerks will enroll for a course in advertising. Like-

* See table on page 20.

wise those acting as assistants to sales people look forward to the time when they can become salesmen, and any course that will hasten the day of promotion will be welcomed. In short, there should be many and varied courses in the commercial departments of the evening schools, in addition to some, and in place of some, of the present offerings which have been transplanted from the day school.

Until those responsible for the direction of evening school commercial courses know the needs of Philadelphia people who desire such courses, no effective program can be developed. Therefore, a survey of commercial employments that will reveal the character of work for which extension evening school training is needed, should be made at once. Whenever a sufficient number are found who need special business training for immediate use and to secure promotion, suitable courses should be organized and offered. There can be no question about the vocational objective in evening school commercial work. The courses should be such as will square with this objective.

Supervision Needed. For the proper development of this work a competent director is needed. In addition, a department head should be appointed in large evening schools to handle the many problems connected with this type of training. In one evening school the head of the commercial department is an English teacher in the day school. In another he is a history teacher. It is difficult to understand why a principal who is not qualified to supervise business training will recommend another who is equally unfitted for such work to supervise a department requiring so much special training and experience. It is quite as difficult to understand why a superintendent will give his approval to such a recommendation. This practice should be discontinued. Commercially trained men should be employed for such important work in all the evening schools.

Special Training for Teachers. While there are many well-trained commercial teachers in the evening schools, there are many others whose training is insufficient. It is not enough that teachers should know their subjects; they must know how to teach, what the relationships between their subject and other subjects are, what objectives are to be the guiding factors in their work, what methods are best adapted to evening school instruction, and many other things connected with extension training. With the inadequate and incompetent supervision referred to above it is apparent that untrained teachers who are recruited from office clerical positions and grammar school teaching positions, are not likely to produce uniformly good results. In the classes taught by trained day-school commercial teachers, results are much better.

It is strongly recommended that a course in evening school com-

mercial teaching be organized in one of the centrally located evening schools.* With such a course in operation, experienced office workers and others who have had good business training, could secure special preparation for evening school teaching. In this way some excellent teachers could be secured to succeed those who drift into this work under present conditions without training. Such a teacher-training course should cover at least 120 hours of instruction.

Classification of Pupils. No adequate classification of pupils was found in the evening schools. Old and young, educated and uneducated, are all grouped together. The minimum number of twenty must be kept at all costs. In one room there were five distinct types of work going on, including "beginning" shorthand, "intermediate" shorthand, "advanced" shorthand, "beginning" typewriting, and "advanced" typewriting. One pupil was well past forty years of age and was employed as an "engineer" in a factory. He was "taking typewriting to get into office work" and the city was paying for it. It is doubtful if he should be encouraged to try to "get into office work"; it is even more doubtful if he can get into such work; and it is certain that typewriting is the poorest possible stepping-stone to such work for such a person. Intelligent supervision would prevent this sort of thing. Pupils should be classified according to ability, age, previous education, and purposes.

Mixed Groups. The practice of throwing groups together, regardless of the character of work they are doing, whenever two remotely related classes fall below the dead line of twenty pupils is bad. It simply means that the time for instruction in each class is halved; the interest of the classes is killed; and the inevitable disappearances of the combined group results. Thus the method used to reduce the elimination of classes tends to eliminate them more rapidly and surely. Courses should be organized with proper regards for the actual needs of employed people; a reasonably good classification of those who enroll should be made; a qualified teacher should be employed for the class and such teacher should be held responsible for the results. The mortality problem will then take care of itself. Continually recruiting new pupils or consolidating ungraded classes will never serve any useful purpose. Of course, it should be understood that two classes in the same grade and kind of work may be united when circumstances require it.

There are other equally bad practices resorted to in an effort to hold pupils. For example, in one school the business English class is allowed to use typewriters about two-thirds of the time. These pupils

* See Addenda.

have never had any instruction in the use of the typewriter, know nothing about the mechanism of the machine, and consequently get little benefit out of the time spent in this way. No effective English composition work can be done on the typewriter by pupils whose whole attention is required to find the different keys and the various parts of the machine. The teacher likewise knows nothing about the typewriter or about typewriting. The principal explained that "they seem to be more interested when working on the machines; so I let them." The day-school commercial department head protested because his machines were constantly out of order, but to no avail. This whole procedure is but a symptom of unsupervised, wasteful, and purposeless evening school work under the guise of business training.

Place of Shorthand in the Evening School. Very large numbers of pupils enroll for shorthand in the evening schools. Those who know some shorthand and want advanced instruction should be accommodated. Those who have made no start in this subject, who have very little time or inclination to practice at home, and who have inadequate background for the performance of stenographic duties, should be discouraged from taking this subject under evening school conditions. It is a facility subject and requires daily instruction and practice which cannot be had in the evening school. Furthermore, typewriting must accompany it and there is not sufficient time for both. A greater part of the money spent in shorthand teaching in the evening schools is wasted.

It is not claimed by the most enthusiastic teachers of this subject that more than a beginning can be made in one year. They admit that pupils must come back a second and a third year. However, the six months interim between sessions, the small amount accomplished, and the apparent futility of the whole project keeps many from coming back a second year. In one school, for example, where about 200 register for this subject each year, there are but fifty or sixty "advanced" pupils. By actual count, only about fifteen of these obtained their initial shorthand instruction in the evening school. Most of them came in to continue interrupted day-school courses in the local high schools, private business schools, etc. All of this simply means that more suitable types of business training, based on the scores of commercial employments, should be made available to these ambitious but misguided people.

Shorthand and Typewriting in Separate Classes. Shorthand and typewriting should be taught in separate classes. The practice of having one teacher teach a group both shorthand and typewriting is bad. One or the other will be neglected. For example, one teacher

with a mixed group left a part of his pupils to work on the typewriter while he took another part of this group to another room to give them needed additional shorthand instruction. This simply means neglect of typewriting and consequently poor results. Doubtless more benefit will accrue to the pupils from the typewriting than from the shorthand instruction, but the former is only a "sideline" with the teacher and receives scant attention. Give each teacher two classes in shorthand. or two in typewriting each evening, but do not expect him to teach both subjects to a single group with proper emphasis on both.

Fundamentals Neglected. Not enough emphasis is placed on the fundamental business subjects as a preparation for certain vocational subjects. For example, in some schools pupils who can neither write well nor figure accurately are devoting their whole time to bookkeeping. In other schools a small amount of attention is given to these subjects. It is a waste of time to train for bookkeeping work without giving adequate attention to these supporting subjects. Special combination classes should be provided for those who need this training. Other exclusively bookkeeping classes should be available to those whose preparation in penmanship and arithmetic is sufficient.

Likewise large numbers of grammar school graduates are enrolled in shorthand classes. As has been pointed out above, it is very doubtful if shorthand can be mastered by many of the large number enrolled in these classes. It should be emphasized also that even if this subject is mastered by those with very little general education and but slight ability in the use of English, the door of stenographic opportunity will remain closed to most of them. Special English study should precede or accompany shorthand instruction in so far as it is permitted to younger boys and girls with but an elementary school education.

One cannot visit the evening schools or talk with those responsible for their organization and management without being impressed with the fact that a disproportionate amount of emphasis is being put upon total enrollment. More attention should be given to problems connected with the development of courses and methods of instruction suited to the needs of those who seek business training in the evening schools. This field is a rich one and it should challenge the interest of many who seek an opportunity to do real pioneer vocational commercial education work.

It is useless to go into further detail regarding the evening school commercial work. As at present organized and conducted, it represents a large waste of money, a large measure of disappointment on the part of many of its students, a sense of dissatisfaction on the part of its teachers, and a stumbling block in the way of effective evening

school training to meet the needs of *business* in evening school *business* training. It is strongly urged that this whole question receive more consideration in plans for future educational developments in Philadelphia.

In fairness to Philadelphia it should be stated that the criticisms made regarding the evening school work in this city would be quite as applicable to that of almost any other large city in the United States. This is because in nearly all cities the importance and peculiar nature of evening school work are not generally understood. The evening school principal is employed on a part-time basis for a position that requires his full time. The evening-school commercial teachers have had no special training for this work and bring to it the viewpoint of the day-school teacher. No one has time to make the necessary analyses of the many commercial positions to determine appropriate instructional content.

Commercial Education in the Continuation School.—Need for Commercial Education. Among those who are required by law to attend a continuation school are many who are commercially employed. In so far as these boys and girls are to receive vocational education, business training is what they need. There is another group of young people who, while industrially employed, desire to prepare for a transfer to commercial occupations. The former group is made up of boys and girls who have substantially completed a grammar school course and are eligible to receive some junior business training. The Junior Commercial Occupation Survey which was made recently in twenty cities by the Federal Board for Vocational Education, bears out this statement.* The industrial group includes many workers who are not so well qualified for junior business training, and yet there doubtless are many who are eligible to take it. It is apparent that some provision should be made for vocational commercial training in the continuation school. To offer the usual types of senior high school work is a mistake, since they are not adapted to the immediate needs or ultimate requirements of such boys and girls. Furthermore, they do not lend themselves to instruction under continuation school conditions.

Kind of Business Training Needed. It will not be necessary to go into detail as to what kind of commercial training is needed in the continuation school, since this whole subject is covered fully in the Federal Board Report referred to just above, which was written by the author of this survey report. The need for commercial education in continuation schools, the character of the junior occupations to be

* See Junior Commercial Occupations Survey Report—Bulletion No. 54. Federal Board for Vocational Education Washington, D. C.

trained for, the present educational status of those who are to be trained, and a number of definite unit business courses are all set forth in great detail in this Federal bulletin.

Present Plan. At present most of the continuation school commercial work in Philadelphia is being done in the regular senior high schools. Several hundred pupils are enrolled in department store classes. None are at present provided for in the special continuation schools, although plans are now being perfected to open classes in the Hollingsworth Continuation School in September.

Several of the high school principals and commercial department heads have manifested much interest in the continuation school problem and have made some special adjustments to take care of continuation school classes. The fact remains, however, that the continuation courses being offered do not differ materially from those taken by the regular high school students except as to the amount of time given to them. Bookkeeping, arithmetic, writing, and typewriting take up most of the time. The courses are altogether too general to meet the needs of boys now at work and face to face with new problems every day that require special training for their solution.

Reorganization Recommended. It should be emphasized that under present conditions it is impossible for commercial department heads to make the necessary investigations upon which to base more suitable continuation school business courses. They are swamped with administrative duties and teaching programs almost equal to those of their teachers. Either the recommendation that a Director of Commercial Education be appointed should be acted upon favorably, or the commercial department heads in schools that have continuation classes should be relieved from all class work so as to enable them to study the real business training needs in Philadelphia with special reference to continuation groups. If neither of these recommendations is acted upon favorably, all commercial work for continuation school classes should be transferred to centralized, special continuation schools and placed in charge of special teachers who should be given time to study their problems.* This plan undoubtedly will give best results, if it is worked out under competent direction. The Director of Commercial Education should supervise the continuation school commercial work under the general direction of the Director of Extension Education.

RECOMMENDATIONS

1. **Administration.** It is strongly recommended that the "Commercial Departments" in the high schools be regarded in their true

* See Addenda.

ight, as schools for the training of boys and girls for immediate employ-
nent and future advancement. They are unlike subject departments
such as English, mathematics, etc.

2. A Director of Commercial Education should be appointed. He
should be held responsible for the development of commercial educa-
ion in the junior high schools, senior high schools, evening high schools,
and continuation schools.

3. The office of the Director of Commercial Education should
have sufficient clerical help to enable him to do the very important
work for which he is employed, unhampered by details which assistants
an do as well.

4. The heads of the commercial departments should not be required
o teach more than ten periods a week, in order that they may devote
more time to the organization and administration of their departments.

5. No one without commercial training should be appointed to
he headship of a commercial department in a high school, evening
school, or a continuation school. No commercial department in any
school should be placed under the supervision of the head of any other
epartment.

6. No commercial department head should be appointed to act
s the head of any other department in any high school.

7. It should be recognized that a competent commercial depart-
ment head is better qualified than other department heads to determine
he needs, both academic and technical, of commercial pupils. He
hould not be required to accept the verdict of an academic depart-
ment head on matters pertaining to the content of a business training
urriculum.

8. **Commercial Education Policy.** A definite commercial educa-
on policy should be established. Objectives should be well defined.

9. The college preparatory objective which prevails in the com-
ercial curriculum of the boys' high schools should give way to a
finite vocational objective. This vocational objective should be
sed on the principle that every commercial boy should be trained to
l a definite commercial position immediately upon the completion of
y unit of the commercial course, and ultimately to advance with the
lp of extension training and experience to a better position in the
usiness world.

10. **Department Records.** It is urged that suitable department
cords be kept in the commercial department office. Such records
ould include detailed information regarding personality, training,
perience, etc., with reference to every pupil who enrolls in the com-
ercial department.

11. **Placement and Follow-up.** The placement and follow-up work of the commercial students should be under the general direction of the director of commercial education. It should be recognized that every boy or girl who enrolls in the high school has a right to placement service whether he takes the entire commercial course or only a part of it.

12. **Part-time Commercial Courses.** It is recommended that the question of part-time, or coöperative, high school commercial courses be investigated with a view to making a recommendation as to whether or not such courses should be established in the commercial departments of the Philadelphia high schools.

13. **Teachers' Examinations.** It is recommended that for a place on the eligible list of teachers, all candidates be required to take a group of commercial subjects with the necessary professional subjects, rather than a single commercial subject and the professional subjects. There should be two groups of commercial subjects, in either of which a candidate may qualify. One group should consist of bookkeeping, commercial arithmetic, business writing, and two other commercial subjects which may be selected by the candidate. The other group should include shorthand, typewriting, business English, and two other commercial subjects to be selected by the candidate. Teachers qualified in either group should be licensed to teach only the subjects in that group.

14. **Quality of Supplies.** It is recommended that the question of the exact kinds of supplies needed be left to the decision of the heads of the commercial departments, and that no central office employee or official be permitted to ignore the request of the department heads without giving his reason for doing so, and without first notifying the department head concerned that his order is not to be filled exactly as it was sent in.

15. It is recommended that the present practice of furnishing supplies of a quality so poor as to make good work impossible in the commercial department be discontinued.

16. **Wider Range of Vocational Training.** The vocational objectives which now prevail in the girls' high school commercial departments should be extended so as to make greater provision for girls with widely different aptitudes and interests.

Vocational Objectives. The definite commercial education content of the boys' curriculums should be extended so as to provide that vocational preparation which insures an employment opportunity through which boys may advance to positions for which their general ability and education have prepared them. A differentiated program

in the third and fourth years should be organized so that boys of different aptitudes and ability may find in the commercial department a type of training suited to their individual requirements. In connection with these differentiated courses, it is recommended that such subjects as salesmanship, business organization and management, advertising, banking and finance, and office management be given the consideration to which they are entitled as important factors in the training of boys for business.

17. Since it is absolutely futile to try to crowd all the usual commercial and academic subjects into a single curriculum, it is recommended that this practice be discontinued in the interest of better business and general education.

18. Since only a small fraction of those who enroll in the high schools continue to the end of the course, it is strongly recommended that a unit-year program be established so that all who enroll may be benefited according to the time they remain in the high school.

19. It is recommended that those who enter high school with the intention of going to college be encouraged to take the college preparatory course instead of the commercial course, even though they are planning to enter a collegiate department of commerce, since this will relieve the commercial department of the necessity for meeting college entrance requirements which are often at variance with the requirements of business.

20. **Elementary Business Training.** The curriculum should be reorganized so as to provide a definite amount of business training and general education for those who leave at the end of the first year and for others who drop out at the end of the second year, as well as for those who graduate.

21. **Commercial Mathematics.** A commercial mathematics course should be given in the first year in conjunction with Junior Business Training and Business Writing. See curriculum suggestions on p. 56.

22. The commercial mathematics course recommended should be taught only by qualified commercial teachers and under the direction of the commercial department head, rather than as a part of the work of the general mathematics department.

23. **Business Writing.** A twenty-minute daily period in business writing is recommended as a substitute for the forty-minute period four days a week for a semester.

24. **Elements of Business.** It is recommended that the course called elements of business now being given in the girls' high schools be so reorganized as to eliminate its present somewhat indefinite character.

25. Much of the paper-work now done in bookkeeping should be done in the elements of business course, so as to permit a more intensive study of the fundamental principles of accounts and the economic aspects of business in the bookkeeping classes.

26. **Bookkeeping.** The time for bookkeeping in the first year of that subject should be extended to five periods a week with homework, or, better still, ten periods a week without homework. Daily single periods are sufficient for advanced bookkeeping and elementary accounting.

27. There should be daily class work in the teaching of bookkeeping. A twenty-minute class exercise followed by forty minutes of laboratory work accompanied by individual instruction, is undoubtedly the best plan for handling this subject.

28. The fundamental principles of business procedure should be taught in the bookkeeping classes. In other words, the primary aim in teaching this subject during the first year should not be the training of bookkeepers, but rather the development of a correct understanding of business procedure.

29. **Shorthand.** Shorthand should be begun in the second year and continued in the third year as one of the differentiated courses available to pupils who complete the high school course.

30. A minimum speed of 100 words a minute on ordinary dictation should be established as the graduation requirement in this subject.

31. More attention should be given to transcription work in the shorthand classes and in connection with the office training work. Frequent transcription speed tests should be given in all the final classes to make sure that pupils not only can write rapidly from dictation, but that they can take dictation and transcribe it at a commercial rate of speed.

32. Those who are manifestly unfitted for stenographic work should not be permitted to take it. Those who do take this subject should be classified with reference to their ability in English, general standing in school, mental and manual alertness, so that pupils of similar ability will be grouped in classes.

33. A short intensive course in shorthand should be organized for those who intend to make use of this subject only in connection with further study in college, or as an incident in their life work. At the same time it is recommended that for those who are looking forward to becoming reporters or high grade stenographers in the offices of executives, the shorthand course be extended so that the high grade work demanded in such positions can be done by those who finish this course.

34. The whole question of the extent to which boys should be encouraged to specialize in shorthand should be investigated.

35. **Typewriting.** Since there are many excellent positions that require skill in typewriting without shorthand, provision should be made for teaching typewriting to girls in the first or second year of the course. If typewriting is taught in the second year, those who drop out at the end of that year will be qualified to do ordinary typewriting work.

36. A definite policy with reference to accuracy in the elementary typewriting work should be established and maintained in all schools.

37. A speed requirement of not less than 40 words a minute on copy work and 20 words a minute on transcription work should be insisted upon for credit in this subject.

38. A public record of the progress of all students in the typewriting classes should be kept in the typewriting room to stimulate effort on the part of typewriting students, and to aid in keeping the classes together so that class instruction can be given.

39. In no typewriting room where elementary typewriting is given should there be more than one make of machine. In schools that have more than one elementary typewriting room, each room may be equipped with a different machine. In the office practice or transcription room, there should be at least one machine of all the standard makes not represented in the regular equipment.

40. No more typewriter desks of the style now in use in practically all typewriting departments should be purchased. Those now in use should be replaced by more suitable desks or tables at the earliest possible moment in the interest of better instruction.

41. The typewriting equipment should not be tied up part of each day by a schedule which requires that shorthand and typewriting be taught in the same room.

42. While some teachers may teach both shorthand and typewriting, it is strongly recommended that the elementary typewriting be taught by teachers who teach nothing else, and that each typewriting room be assigned to a particular teacher who is held responsible not only for the typewriting work, but for the room and the equipment contained in it.

43. Students who are doing a different grade of typewriting work should not be scheduled in the same room at the same time. In other words, it is urged that typewriting be scheduled exactly like any other class so as to permit the teacher to concentrate on a single group for the entire class period.

44. Typewriting should not be featured in boys' high schools except for those who wish to become thoroughly qualified for stenographic work. In such cases it should be given time enough to enable the teachers to develop correct technique and the ability to write at a commercial rate of speed with a reasonable degree of accuracy. A short intensive course may be made available to all boys in the early part of the course.

45. **Office Practice.** It is recommended that the office practice courses now being given in the senior year be extended to five periods a week for the entire year; that many additional types of office training be introduced into this course; that all fourth year commercial pupils be required to take some of this work; and that an opportunity be given to those who seem better fitted for general office work than they are for stenographic or bookkeeping work, to specialize in certain phases of this work.

46. An Office Practice course, suitable for boys and based on the business employments which are open to boys, should be organized and offered on a time and credit basis that will insure its benefits to all commercial boys.

47. **Commercial and Economic Geography.** It is recommended that the objectives of, and methods used in, commercial geography be made the subject of more careful consideration on the part of those directing commercial education. It is also recommended that this subject be not taught apart from the commercial department.

48. Provision should be made for teaching commercial and economic geography to a greater extent in the girls' high schools.

49. **Commercial Law.** Under the elective plan with reference to commercial law which prevails in several of the girls' schools, very few girls get this subject. It should be made a required subject in the fourth year for all commercial pupils.

50. **Retail Selling.** Since it is quite generally recognized that, with the reorganization of the retail selling business which is now going on, this field offers a larger opportunity than any other field for women, retail selling courses should be introduced into the third and fourth years of the girls' high schools.

51. To avoid previous mistakes in connection with the development of retail selling courses, and to lay a sure foundation for success in giving this kind of instruction, it is recommended that a very careful study of this field for business training be made by a committee representing the commercial departments of the girls' high schools.

52. **Foreign Language.** Foreign language should cease to be a requirement of any commercial pupil in any high school. Only those who are especially interested in this subject, who are qualified to study it, and who have some definite reason for doing so, should be permitted to elect it.

53. It is recommended that in the commercial foreign language classes, practical methods suited to the realization of the practical aims of this subject be used, and that if necessary to accomplish this purpose, commercial and academic pupils be scheduled in separate classes.

54. **Science.** It is recommended that the question of modified science courses for commercial students be investigated with a view to establishing such courses if there is sufficient demand for them.

55. **Evening Schools.—Extension Character of Work.** It is recommended that the extension character of evening school work be recognized in the organization of courses.

56. **Survey of Needs.** It is recommended that a careful study be made to determine the exact duties of those who seek commercial training in the evening school, the reasons for attending evening school, and the promotional possibilities that are open to such persons, with a view to establishing evening school courses that are more nearly adapted to the requirements of those who are depending upon evening schools for promotional training.

57. **Qualifications of Teachers.** It is recommended that greater attention be given to the qualifications of candidates for evening school commercial teaching positions to insure that those who are employed not only know the subject matter of the subject they are employed to teach, but also the best methods of teaching the subject, the purposes that lie behind the teaching of the subject, and the requirements that must be made of the students to insure good work.

58. **Teacher-Training Class.** It is recommended that a special evening school commercial teacher-training course be organized in connection with one of the centrally located evening schools.

59. **Classification of Pupils.** Students in evening school classes should be more carefully classified with reference to their age, previous education, general ability, objectives, and available time for outside study.

60. **Mixed Class Evil.** Evening school classes in different subjects, or in different phases of the same subject, should not be consolidated into a single section to be instructed in a single period.

61. **Wrong Use of Typewriters.** It is recommended that such practices as permit evening school English pupils to waste their time trying to write on typewriters, in order to hold the class, be discontinued.

62. **Shorthand Limitation.** It is recommended that shorthand instruction for beginners in the evening schools be restricted to those who have a fair general education, a good command of English, some time to practice between sessions, and the necessary definiteness of purpose to insure reasonable progress under night-school conditions.

63. **Advanced Shorthand Classes.** It is recommended that the present practice of organizing classes for those who have had shorthand instruction elsewhere in the evening school, and for those few who return for the second year of instruction in the evening school, be continued.

64. **Bookkeeping and Preparation for it.** It is recommended that no pupil who is manifestly weak in business arithmetic and business writing be permitted to devote his entire time to bookkeeping. Combination classes should be organized for such students wherever necessary.

65. **Development of Courses and Methods.** It is urged that more attention be given to the development of suitable evening school commercial courses and proper methods of teaching.

66. **Qualified Department Heads.** The present practice of employing English and history teachers to act as heads of commercial departments in the evening schools should be discontinued.

67. **Junior High Schools.—Junior Business Training Needed.** It is recommended that in the organization of junior high schools in Philadelphia, provision be made in the eighth and ninth years for a suitable type of junior business training. In this connection it is urged that a new and more elementary type of business training be developed for this school in place of the more advanced commercial work which in many cities has been forced downward from the senior high school commercial department into the junior school.

68. **Continuation Schools.—Business Training Needed.** Since it has been established by surveys in twenty cities that the great majority of boys and girls of continuation school age who are employed in commercial pursuits, have had a grammar school education, it is recommended that the present practice of providing an opportunity for elementary business training be continued in the continuation schools.

69. **Concentration of Commercial Work.** It is recommended that this commercial work for continuation groups be transferred to central continuation schools.

70. **New Courses Required.** It is also recommended that continuation school courses somewhat like those outlined in Bulletin No. 54—Junior Commercial Occupations Survey—published by the Federal Board for Vocational Education, Washington, D. C., be offered in place of the formal commercial courses now being offered.

APPENDIX A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF PUBLIC INSTRUCTION
HARRISBURG

STENOGRAPHIC TEST

Part I—Business Letter

Dear Sir: As chairman of the Speakers Committee of the Chamber of Commerce, I wish to extend an invitation to (20) you to address our members on the league of nations, a topic uppermost in the minds of thinking men all (40) over the world.

The committee endeavors to secure men of national reputation to talk on matters of national importance. Ever (60) since President Wilson went abroad there has been much interest manifested as to how a league of nations can be (80) formed, what its responsibilities would be and what power it would have to enforce its decrees.

From your experience as (100) a jurist and your study of international questions, we believe that you are eminently fitted to discuss this very important (120) and interesting question.

If you will indicate some date in the near future when you can be with us, satisfactory (140) arrangements can be made. We are looking forward to receiving your favorable reply at your earliest convenience.

Very cordially yours, (160)

(Allow one minute pause)

APPENDIX A—Continued

Part II—Solid Matter

THE STOCK MARKET

A stock market differs from a produce market in that it deals in the stocks and bonds of industrial corporations (20) and in certain

kinds of national, state and municipal bonds. The stock market, while not confined to modern times, has (40) grown to such enormous proportions during the past century, that its development may be cited as a decided change from (60) old market conditions.

The importance of large industries is admitted but as a general rule no one person has enough (80) money to organize an industry. The money of a large number of men must be combined in order to get (100) sufficient funds for this purpose. What is known as the stock of a corporation is nothing more than a piece (120) of paper on which is written the fact than an individual, whose name appears on the paper, has contributed a (140) certain amount of money for the purpose of organizing a particular industry. All the stockholders taken together are the owners. (160)

APPENDIX B

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF PUBLIC INSTRUCTION
HARRISBURG

TYPEWRITING TEST

Part I—Speed Test

The telephone of the rural districts is the backbone of the telephone industry. It is unlike that of the big cities. Although some people think of it as the old-fashioned telephone, it is far from being old-fashioned. It is the instrument best adapted to the needs of towns and villages and surrounding farm telephone lines reaching out into the most remote corners of the country.

It is what is known as the magneto or local battery telephone, a highly developed piece of apparatus. Each instrument has its own battery for furnishing talking current, and a magneto to force ringing current over the line. It is a little independent telephone power plant. Hundreds of thousands of these telephones for village and farm use have been built and are giving steady service in all parts of the country.

In all parts of the world and under all sorts of conditions these rural telephones are measuring up to the best traditions of the telephone for service and convenience. These telephones are specially welcome in the farming districts where they are saving many long miles and weary hours of travel. Today the farm equipped with the telephone is a better place to live largely through the development of the rural telephone service.

APPENDIX B—Continued

TYPEWRITING TEST

Part II—Tabulation

1. The following is the Fourth Weekly Report made by the Federal Reserve Board on Debits to Individual Accounts in the New York District:

   Albany: Sept. 4, $14,485. Sept. 11, $15,563; Binghamton: Sept. 4, $2147, Sept. 11, $2623; Buffalo: Sept. 4, $47,253, Sept. 11, $55,276; New York: Sept. 4, $2,997,636, Sept. 11, $3,512,698; Passaic: Sept. 4, $2788, Sept. 11, $3385; Rochester: Sept. 4, $19,835, Sept. 11, $19,992; Syracuse: Sept. 4, $10,575, Sept. 11, $7233. Totals: Sept. 4, $3,094,719, Sept. 11, $3,616,770.

   Using the head: "Fourth Weekly Report by the Federal Reserve Board," arrange the above data under proper subheads in tabular form on a single sheet of paper. Add the footnote, "All amounts are given in even thousands."

2. Answer both a and b:
   - a Explain how the tabulating device may be used to advantage in letter writing.
   - b Explain how the tabulating device may be used in an exercise like that in question one.

APPENDIX C

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF PUBLIC INSTRUCTION
HARRISBURG

COMMERCIAL ARITHMETIC RAPID CALCULATION TEST

Part I—Ten Minutes

1 a

Add	Add
58679	64758
64758	46732
32467	12836
90113	76019
78943	31596
65045	46301
47621	87695
90642	29011
54670	64532
40198	87799

b Subtract

87609215006712
51996983095023

c Find the result in each of the following:

½ of $48.56 =
$^1/_{10}$% of $32.75 =
2½% of $840 =
133⅓% of $360 =

d Find the interest on each of the following:

$420	for	33 days at 6%	=
600	for	72 days at 6%	=
440	for	60 days at 4%	=
66	for	100 days at 3%	=
128.40	for	9 days at 6%	=

e Find the date of maturity in each of the following:

Date of note		Time	Date of maturity
April	18	60 days	
August	2	2 months	
September	8	45 days	
March	12	70 days	
June	18	120 days	

APPENDIX C—Continued

COMMERCIAL ARITHMETIC

Part II—Seventy-five Minutes

1. Coal is bought at the mines at $5.75 per long ton, freight from the mines is $2.30 per long ton. The retail dealer sells at $9.65 per short ton. Find the gross profit on two carloads weighing respectively 79,876 lb. and 80,640 lb.
2. You instruct your clerk to mark the item in the following invoice to make a profit of 33 1/3%; at what price, to the nearest cent, should he mark the buttons per dozen?

Chicago, Ill., Jan. 12, 1919.

John French & Co.
Sold to Charles M. Miller,
Utica, N. Y.

---

20 gross pearl buttons @ $6.50
Less 20% and 10%

3. On May 14, 1919, you received an invoice of merchandise, dated May 12, 1919, terms 3/10 n/60. The face value of the invoice was $2482.40. In order to take advantage of the 10 day terms, you discount your 60 day note for $2500 at 6%. On May 21 you write your check for the net amount of the invoice. How much do you gain by borrowing the money to discount this invoice?
4. Which is the better investment and how much, $40,000 invested in 5% stock at 102 7/8 or in 4% stock at 80 3/8 brokerage 1/8% in each case?

5. An agent received $1500, with instructions to buy coffee; how many pounds can he buy at 37½¢ a pound, if he charges 6% commission for buying?

SCHOOL KEY

A South Philadelphia High School for Girls.
B Kensington—Girls.
C Frankford—Girls.
D West Philadelphia High School for Girls.
E William Penn—Girls.
F Germantown—Girls.
G West Philadelphia High School for Boys.
H South Philadelphia High School for Boys.
I Northeast—Boys.
J Frankford—Boys.
K Germantown—Boys.
L Central—Boys.
M West Philadelphia Evening School.
N South Philadelphia Evening School.
O William Penn Evening School.
P Central Evening School.
Q Northeast Evening School.
R Frankford Evening School.
S Hollingsworth Central Continuation School.

ADDENDA

1. Since this report was written a Director of Commercial Education has been appointed by the school board on the recommendation of the superintendent.

2. Since the survey was made the Department has been assured that there is no intention to require a foreign language of commercial pupils and that this matter is being taken care of in the new curriculum statement.

3. The Superintendent of the Philadelphia Schools has assured the Department that plans for organizing training courses for prospective evening school teachers are already under way.

4. Since this report was written continuation school commercial work has been discontinued in all but two high schools. Steps are being taken to complete the concentration of this work in special continuation schools.

CHAPTER III

ENGLISH

Organization in the Elementary Schools.—Administration and Supervision. There is an associate superintendent in charge of elementary schools, kindergartens, and the teacher training school of Philadelphia. The teacher training school was but recently detached from a grouping with higher schools and re-grouped with the elementary schools as a unit of supervision. As the students from the teacher training school largely enter the lower grades where English instruction is the major work in hand, this is a commendable change. One of the great handicaps to English teaching has been the training of teachers according to the standards set up by training schools without a knowledge of what was actually needed where the teacher so trained was to begin work. As the effort for good English is primarily a work for the elementary schools, the superintendent who is responsible for instruction in English should also determine the content and method of the English work in the training school. It is fortunate that the present associate superintendent is unusually familiar with the problems of English instruction.

The supervision of English instruction is directly done by the principal of the local school. In addition to the duty of classroom supervision in English, he is responsible for carrying out the course of study with the time allotments, for making out a local course of study in primary reading in the first three grades, for the selection of a basal reading system, and for the promotion of pupils in the English subjects.

Many of the schools have departmentalized English instruction in the seventh and eighth grades and some have it in the fifth and sixth grades. In fact, in a few schools oral composition is taught by one teacher and written composition by another. Though there may be reasons for a separation of the teaching of composition and literature in high school grades, it is doubtful if there can be any justification for a division of composition work such as this.

In reply to the question "What suggestions have you to make as to how the teaching of reading may be improved in your school," asked of the seventy-two principals in whose schools the silent reading tests were given, a number of them suggested placing the best experienced teachers in the first grade with much smaller classes.

Time Allotment. The term "English" as used in the elementary course of study in Philadelphia includes reading, literature, oral com-

position, written composition, and spelling. Handwriting is not included. The school day is five hours long except in case of the part-time sessions, when it is but three hours. The time devoted to English is on the average 40 per cent of the school day, not counting recess periods. This ranges from 60 per cent in the first grade to 29 per cent in the eighth grade. It is distributed as follows over the grades: grade one, 780 minutes a week; grade two, 720; grade three, 540; grade four, 480; grade five, 480; grade six, 480; grade seven, 405; grade eight, 405.

The table that follows gives a comparison between the time devoted to English branches in the eight grades in Philadelphia and the average for fifty other cities. It is estimated in hours because of the varying length of the school day and the school year.

	Hours per Year.	
	Average for Fifty Cities.	For Philadelphia.
Reading and Literature	1,280	1,613
Composition	864	946
Spelling	482	280
Total	2,626	2,839

Classes and Classrooms. The most important teaching to be done in a school system, and the most difficult to do properly, is that of primary reading. The most persistent handicap to such teaching is the overcrowded room. There exists now, and has existed for some time, extreme overcrowding in the primary grades that cannot in any way be regarded as an emergency condition. It is a failure on the part of the Board of Public Education to provide at the right time adequate classroom facilities for teaching the English subjects in the lower grades. With many part-time classes assembled for three hours a day, an enrollment of fifty or more is not uncommon. No teacher should be expected to teach that many children an elementary use of the most important tool in all school work. Nor should two teachers teach at the same time in the same room, as is now being done.

Many of the classrooms are inadequately lighted either by natural or by artificial light. The result is not a fit condition under which to learn to read print or to continue reading print. Practically all of the rooms are without enough blackboard space for English work. This is as true of the newer as of the older buildings. These newer buildings have a peculiar sliding partition between rooms that is set with narrow high panels of slate that are useless for any kind of paragraph writing. Only a few rooms are provided with movable desks, one of the necessary conveniences in English instruction, especially in socialized projects.

Tables that are necessary in primary grades, and also needed in the intermediate and upper grades for reference books and materials, have not generally been provided.

Textbooks and Supplies. The Committee on Property of the Board of Public Education apportions yearly to each school its proportion, based on the enrollment, of the appropriation for books and stationery. The local principal determines not only the basal reading system to be used in the first three grades, but also what supplementary readers are to be used within the limits of the appropriation. In many of the schools an inadequate number of supplementary readers are available. Some principals order enough readers for but one section of a room and in that way secure from the appropriation double as many titles. A more liberal appropriation is needed for a greater quantity of supplementary reading.

The practice of supplying each pupil from the fifth grade up with a desk dictionary is a very commendable one in helping to establish the dictionary habit. As letter writing is from a social point of view such a necessary English accomplishment and needs such careful treatment in the classroom, a regular social-form letter paper and envelope ought to be included in the supplies for English instruction.

Relation to the Public Library. As a rule teachers do not sign library cards for pupils below the fourth grade. The majority of the schools are within walking distance of some branch of the Public Library. The development of the library habit is a worthy aim of elementary English instruction. But the extent to which this habit is developed will depend largely on suggestive guidance on the part of the individual teacher and on a coöperative attitude and understanding on the part of the principal and the librarian. In the seventy-two schools that were given silent reading tests the number of library cards held by pupils ranged from sixty-three (63) in one school to one thousand five hundred and fifty (1550) in another.

Measuring Classroom Achievement. A commendable move has been made by the associate superintendent in charge of elementary schools in the gradual introduction of standard tests to check up in a comparative way certain phases of English instruction. This is in accord with the best present day practice. Last year nearly all of the schools gave the *Monroe* silent reading test. In January of this year a spelling test was made by the use of the *Ayres'* measuring scale for ability in spelling. A number of principals have suggested that more standardized material for testing English progress be available through regular school channels. This attitude indicates a healthful professional trend.

Course of Study.—How the Course was Prepared. The present course of study in English was prepared by a committee appointed by the Superintendent of Schools in 1917. This committee was made up of three assistant district superintendents, nineteen principals, two principals of practice schools, two teachers from the training schools, the director of kindergartens, and one head of a high school English department. The plan of having a committee take plenty of time to work out a course is a very good one The representation of classroom teachers was small, but no doubt a number of the principals had been recently promoted and still retained the practical viewpoint of the teacher actually at work.

Departure from the Former Course. The committee had been appointed for the purpose of revising an already established and incomplete course in language. This was an impossible task, as is made clear in the foreword to the new course: "A quarter-century has witnessed such a shift of viewpoint and such fundamental adjustment of emphasis in the teaching of English throughout the country," that the committee set to work to make a new course in English "which should represent the present consensus as to the 'what,' the 'why' and the 'how' of English teaching in the elementary grades." To the committee must go the credit of having accomplished this purpose and having, on the whole, accomplished it very well. The new course is a constructively progressive organization of the English subjects. In comparison with the old course in language the new course in English makes two very marked and significant departures:

1. It provides for a larger use of children's experiences with emphasis on expression in English.
2. It provides opportunity for a liberal reading and appreciation of children's literature.

The two most specific departures are these:

1. Technical grammar is recognized "to the degree in which it functions in the teaching of composition, oral, and written," and is not justified on the grounds of "mental discipline" nor as "a necessary basis for the study of foreign language in the higher schools."
2. In regard to spelling, the purpose is to have children "learn to spell only those words which there is a likelihood of their needing in their written work."

These sane aims must be commended. Probably no single phase of English teaching in the past in both the elementary and high schools of Philadelphia has been so time-consuming and to such little purpose

as the struggle with technical grammar for technical grammar's sake. The change in the point of view from anatomical English to functional English is refreshingly promising.

The Scope of the Course. The scope of the English work as provided for in the course of study may be gathered from this outline:

1. *Oral English:*
   a. *Oral composition:* common interests of children, dramatization, pictures, literature, the informal talk, the formal talk.
   b. Formal reading and declamation.
   c. *Corrective work:* errors of expression and faulty pronunciation.
2. *Written English:*
   a. *Written composition:* letter writing, sentence study, paragraph study, variety of expression, grammatical terms, rules of syntax.
   b. *Vocabulary building:* new words, convenient expressions, synonyms, word derivations.
   c. Punctuation.
   d. *Spelling:* group words, sight words, specified difficult word lists.
3. *Literature:*
   a. *Prose:* stories for telling, reading for appreciation.
   b. *Poetry:* poems for appreciation.

The course is not crowded with too much detail; moreover it is written in good English, a virtue in any English course. The arrangement is definite, the make-up of the pages is attractive, and the general treatment is interesting and easy to grasp. A single attached synopsis sheet gives the whole scope of the course in a compact form.

The bulk of the pages have to do with (1) suggestions as to method and with (2) suggestive lessons. There is too much attention given, however, to a study of word derivation and word grouping. In view of the wise elimination of grammatical technicalities, the space that is given to word building and word analysis cannot consistently be justified. Furthermore, there is adequate provision made for dictionary use and the formation of the dictionary habit, a thing of much more value than all the etymology that can be given.

Outstanding Features. Here are some general trends of the course that are highly commendable:

1. It gives due weight to oral composition.
2. It lays much emphasis on letter writing in written composition.

3. It gives a definite place to story telling in the primary grades.
4. It stresses vocabulary building and the use of the dictionary.
5. It makes an attempt to induce an appreciation for good literature, especially for poetry.
6. Its suggestive methods are such as to inspire self-confidence and self-criticism on the part of the pupils.
7. It does not provide for drill and review to the extent that they will kill initiative and the child's capacity for constructive thinking.

An Important Omission. The course of study does not include the most difficult and skilled work of English teaching, that of reading in the first three grades. This comment appears in the foreword: "The course makes no provision for teaching the mechanics of primary reading. This is left to the various reading systems now used in the schools." Answers from a sampling of fifty-five schools scattered through the eight districts of the City show thirteen different basal reading systems in use. Some of these systems lay great emphasis on phonetic drill work, some on interesting content, while a few preserve a fair balance between interesting content and drill exercises.

There can be little defense made of the present individual school practice in regard to primary reading courses when there is for all other phases of the English work a unified course of study for the City.

It is strongly recommended that a course of study in reading for the first three grades be prepared by a committee, as was the present English course, and issued as a supplement. It should indicate a minimum of content, vocabulary, and phonetic work; but the phonetic device should not be carried to the extreme of being made a basis of method. The course should be rich in suggestions on method and in suggestive lessons. It should preserve a sane balance between the formal side as a groundwork in the mechanics of reading and a content that is interesting to children. There should be enough flexibility to make it adaptable to non-English-speaking districts where the problem is one of language as well as of reading. As is done in the case of literature outlined in the English course from the fourth grade up, there should be an outline of a minimum of supplementary readers from which to select. The number of such readers could be practically double what it now is.

In the selection there should be included a factor of adaptability according to the social character of the school population.

Coöperation with Other Branches. The present course made a wide departure from the old practice of making a study of English "a sort of common ground for all the other subjects from which in

large part it must borrow its content," as is stated in the foreword. This was a wise departure. But the course does not make clear, in a manner that stands out, the necessity for a coöperative emphasis in the English of such subjects as history and geography, especially in the upper grades.

Correction of Errors of Speech. The course does well to distribute definitely to each grade a specific portion of work in the correction of errors in expression. The suggestions for informal and systematic correction, especially of common and persistent errors, are good. But it is not made clear that in oral speech elimination of errors is largely an individual affair, differing widely in that respect from errors in writing. Errors in the vernacular may not be city-wide. The course could well plan for a local study of errors in each district and base the corrective work on the errors that the study reveals.

Relative Emphasis. The schedule here given shows how much time is allotted, and it is liberal enough, to the divisions of English introduction.

Grade A.	I	II	III	IV	V	VI	VII	VIII
Reading	570	480	250	140	65	65	45	45
Literature	30	30	75	145	120	120	120	120
Oral Composition	130	110	90	90	100	100	60	60
Written Composition	...	20	45	45	105	105	150	150
Spelling	60	60	60	60	90	90	...	...

NOTE.—The time is given in minutes per week.

Classroom Instruction in Reading.—The Schools Visited. Brief visits were made to thirty-five classrooms where reading recitations were in progress in eight different schools of the city, one in each of the eight districts. It was merely a sampling and was wholly inadequate for a complete discussion of classroom instruction in reading. All that is attempted here is to enumerate a few impressions gathered from this limited observation. It would be a rash venture to attempt either a verification or an explanation of certain noticeable results of the standard tests from these classroom visits.

There is a varied school population throughout the eight districts. One school is practically all Italian, one is all colored, one is of mixed alien and colored pupils, one has a large Hebrew element, and several are almost wholly made up of pupils from native American parentage. Yet the racial character of the pupils has less to do with classroom performance in reading than is commonly believed. This is especially true where there is adaptability to local needs on the part of the course in reading, plus a good social and professional spirit. Only a few

teachers who were visited excused the poor work in reading on the grounds of the children's alien parentage.

As a rule in the schools visited, the professional spirit was high and the principal was constructive in her supervision. Three of the principals were especially effective in the directing of primary reading. In most of the cases there was a commendable effort to make the school meet the needs of the pupils and of the community.

Standards in Mind. The efficiency of the classroom as a going concern is determined largely by the quality of the instruction and the study habits of the pupils. These questions should be asked: Do the pupils look bored or do they work with zest? Is the teacher's time used in keeping order or does she teach interestingly? Is there an opportunity for the pupils to think? Is the entire class working on the problem in hand? Is there a sound social spirit in the classroom?

Classroom Practice. At least three-fourths of the recitations observed were, in the judgment of the visitor, successfully conducted, if the point of view of the last paragraph is kept in mind. But this percentage does not hold true in every school. In some schools practically all recitations were good; in others not half of them were good.

A general effort is being made to apply the English course of study. In the formal reading lessons above the third grade there were many examples of a mastery of the technique of silent reading. There was a skillful use of thought questions. Two successful lessons were heard in reading for the appreciation of literature. They illustrate a suggestion in the course of study that "the first requirement for the successful teaching of appreciation is an appreciative teacher."

In the primary grades there was a wide diversity in the character of the drill in phonetic elements and in the ability of the child to help himself over hard words. Though there was a good bit of sentence reading without attempt at thought, as a rule there was effort to get the sense of what was read from the first grade up. As judged by oral standards in children's use of the language, there was but little effectual expression in primary reading, though phonetic distinctness generally prevailed. In fluency most of the oral reading was less than average.

As good practice goes in seeing what is on the pages of a book, there was a marked disregard of a convenient position for the book in relation to the position of the eyes and the source of light. A child needs to be taught how to look properly at so important an instrument of information as the pages of a book. Several primary reading classes were assembled in dark parts of the room. Not infrequently in oral reading before the class, there was neglect of a suitable breathing and a suitable seeing position.

Many of the schools give evidence of a thoughtful planning of the reading lessons. Many have clearly defined standards for checking up results; but this is not always evident.

Standard Reading Tests. The tests that were given are measures of performance on some particular phases of reading ability. They show what was done with certain standard reading matter under certain standard conditions. They do not tell why it was done; that can only be inferred. But as these tests have been widely used they have a fairly reliable comparative value.

These tests were given:

1. The Gray Standardized Reading Paragraphs that test oral reading for pronunciation and smoothness.
2. The Courtis Silent Reading Test No. 2 that tests the silent reading of a simple story and the answering of simple questions, on the relation existing between its elements, by yes or no.
3. The Monroe Standardized Silent Reading Test that tests the reading of detached paragraphs and the answering of a question on the sense of each.

The Selection of Schools. A method of selection that would insure an impartial sampling of schools, rooms, and pupils was used.

For the oral reading test a selection of three schools was made from each of the eight districts of the city, excepting District No. 3, where four were chosen. An average group of fifteen pupils was taken from the "B" section of a room from each grade in a school. In Philadelphia the "B" section of a grade is doing the last half year's work of the grade. This selection was made by taking from an alphabetical list of the pupils in each grade every fifth one beginning with the first, then with the second, and continuing in this way until the list was completed. The total number of pupils tested was 2863.

In the silent reading test for grades three, four, and five a selection of nine schools from each of the eight districts was made. This selection included both the "A" and "B" sections of the grades. The total number of pupils tested was 12,115. The selection for the silent reading tests for grades six, seven, and eight was made in the same manner and the test was given to 8622 pupils.

Giving the Tests. The tests were given in April by a selected group of senior girls from the Normal School and by principals and teachers who are special students in school administration at the University of Pennsylvania.

The instruction on how to test in oral reading was given to 50 students of the Normal School by Dr. William S. Gray of the University

of Chicago, the author of the test. These students worked in pairs at the 25 schools, testing an average of 120 pupils at each school.

The instruction on the use of the Courtis and Monroe silent reading tests was given by Dr. LeRoy A. King of the University of Pennsylvania to a group of 82 principals and students. One person was assigned to give the tests in each school.

The scoring and tabulation of the tests was done under the general direction of the Bureau of School Administration of the University of Pennsylvania.

The Test in Oral Reading.—1. The Nature of the Test. The "Gray Standardized Reading Paragraphs" is a test consisting of a sheet of twelve independent paragraphs, each more difficult than the one before it in vocabulary, length of sentence, sentence structure, and sentence meaning. These paragraphs are selections from school readers and from literature. The arrangement as to steps of difficulty was determined experimentally by testing several thousand children.

2. **What was Done with the Test.** The test was given to pupils individually in a quiet room and according to a method that tended to relieve them of any fear or hesitancy in making a usual effort to read orally. A pupil began reading with the first paragraph and continued until seven or more errors were made in each of two paragraphs. These errors might consist of mispronunciation, omission of words, insertion of words, repetition, and substitution. A record was made of the errors together with the time required in the reading of each paragraph.

3. **What the Test Shows.** The test provides a record of errors and time in reading. It does not provide a record of the quality of oral expression nor of the ability to understand what is read. But Dr. Gray has concluded from experiments that the time records and records of errors can be relied on as satisfactory measures of the child's reading ability.

The scores of what happened in the test are calculated on the time required to read a paragraph and the number of errors made. They show in a simple numerical statement the child's record based on the fact that a paragraph should be read in a certain time with a limited number of errors. The average class score is found by taking the arithmetical average of all the individual scores in the class.

4. **The Results in Philadelphia.** Table 1 shows the actual average scores for each grade by schools, districts, and of the city as a whole, together with the Gray Standard averages.

TABLE 1.—ORAL READING TESTS

GRADES—B SECTION

Name of School.	Average Score.							
	I	II	III	IV	V	VI	VII	VIII
District No. 1:								
Belmont	18.6	26.8	44.6	36.0	44.9	45.5	46.3	46.6
Harrity	28.6	24.9	42.4	44.8	40.0	42.2	38.8	36.0
Stowe	0.0	36.1	37.0	36.5	57.1	41.8	44.0	38.6
Total	15.7	29.3	41.3	39.1	47.3	43.2	43.0	40.4
District No. 2:								
Baldwin	0.0	21.5	32.5	43.0	33.7	63.5	36.0	41.4
Childs	9.9	39.1	27.5	33.6	35.3	39.9	28.5	34.9
Read	0.0	0.0	20.6	38.4	36.7	37.5	34.9	39.8
Total	3.3	20.2	26.9	38.3	35.2	47.0	33.1	38.7
District No. 3:								
Hay	0.0	19.4	35.9	40.8	44.3	42.8	44.8	44.7
Southwark	0.0	9.0	28.3	36.1	37.5	37.8	37.3	33.6
Welsh	0.0	38.0	42.5	47.5	37.2	34.5	38.5	32.5
Wilson	5.9	19.7	37.9	34.9	34.0	41.9	35.3	48.1
Total	1.5	21.5	36.2	39.8	38.3	39.5	38.9	39.9
District No. 4:								
Fox Chase	6.9	31.3	36.7	39.6	42.1	42.8	37.9	37.0
Longfellow	9.8	37.2	44.8	45.8	38.0	43.8	40.4	39.2
Webster	16.7	37.7	44.8	46.2	46.0	46.7	47.4	42.9
Total	11.1	35.4	43.4	43.9	42.0	44.4	31.9	39.7
District No. 5:								
Hanna	4.8	32.9	38.2	38.3	41.0	38.4	34.4	40.3
Overbrook	7.3	41.1	38.0	45.7	26.6	50.4	47.0	48.9
Reynolds	6.4	27.3	42.1	45.3	37.7	39.7	40.2	40.4
Total	6.2	33.8	39.4	43.1	35.1	42.8	40.5	43.2
District No. 6:								
Hancock	0.0	1.3	36.8	38.2	38.3	33.8	45.5	33.6
McCall	7.3	....	....	41.1	37.5	41.5	32.4	40.9
Northeast	0.0	38.9	36.3	43.3	45.0	47.7	38.8	42.6
Total	2.4	20.1	41.5	40.9	40.3	41.0	38.9	39.0
District No. 7:								
McClure	25.8	40.0	44.9	45.0	37.0	54.9	35.2	47.8
Muhr	17.8	38.9	43.0	39.5	44.1	40.2	37.6	41.6
Tilghman	7.8	52.6	43.4	37.2	40.7	41.0	42.2	46.5
Total	17.1	43.8	43.8	40.6	40.6	45.4	38.3	45.3
District No. 8:								
Cook	3.2	18.0	19.4	21.1	23.5	24.0	21.1	25.7
Fitler	51.0	40.8	46.8	45.8	49.6	47.9	50.3	38.8
Manayunk	2.4	32.6	34.0	42.9	42.5	48.4	40.7	44.0
Total	18.9	30.5	33.4	36.6	38.5	40.1	37.4	36.2
Average Score—City	9.6	29.4	37.6	46.8	41.3	44.5	39.3	41.9
Gray Standards	31.0	43.0	46.0	47.0	48.0	49.0	47.0	48.0

The Silent Reading Test in Grades Three, Four and Five.—1. The Nature of the Test. The Courtis "Silent Reading Test No. 2" is a story entitled "The Kitten Who Played May Queen" and has been adapted from a chapter in a story that appeared in a magazine for children. The first part is made up of fifteen paragraphs and is 567 words in length. The second part consists of seventy questions

on the sense of the paragraphs of this story and are to be answered by writing "yes" or "no."

2. **What was Done with It.** The test was given to groups in classrooms. On a signal from the examiner to start, the children read silently to get the meaning of the story for exactly three minutes, drawing a line around the last word when the signal to stop was given.

The questions to be answered by writing "yes" or "no" were printed on the reverse pages of the test, together with the paragraphs in case a pupil had forgotten the story and needed to re-read sentences. The pupils worked at answering the questions for exactly five minutes, indicating the point reached by drawing a line around the number of the question on which he was working.

3. **What the Test Shows.** The test measures the ability to read silently and understand a simple story and to answer questions about it. The extent to which a pupil has done these two things is indicated by a score, or the number of words he has read per minute and the number of right answers made to questions in five minutes. The latter result is expressed by an "index of comprehension," which is the per cent which the difference between the right answers and wrong answers is of the right answers.

By taking that score above which lie half the class scores and below which lie half the class scores there is secured the median rate and the median index of comprehension for the grade.

4. **The Results in Philadelphia.** Table 3 gives the median rates and median indices of comprehension for the eight districts, for the city as a whole, and for the Courtis Standards determined by extensive experimentation. Table 2 gives the results of the tests by schools.

The Silent Reading Test in Grades Six, Seven and Eight.—1. **The Nature of the Test.** The Monroe "Standardized Silent Reading Test" used was the edition known as Form 2, Test II. It consists of thirteen independent paragraphs, two of which are in verse form. After each paragraph is one question on the sense of it to be answered by drawing a line under a word, or by some other brief form of answer that requires the following of instructions.

2. **What was Done with It.** The test was given to groups in class rooms. After the signal to begin exactly five minutes were given to reading the paragraphs and recording the answers, the paper being immediately collected.

3. **What the Test Shows.** The test is designed to measure how quickly and accurately a pupil can read silently. In order to determine

TABLE 2

School.	Grade III B.		Grade IV B.		Grade V B.	
	Words per Minute.	Index of Comprehension.	Words per Minute.	Index of Comprehension.	Words per Minute.	Index of Comprehension.
Belmont	98	91	133	85.5	169	94
Dunlap	138	88	145	95	171	95
Harrity	92	87	128	90	175	94
Huey	118	91	118	93	178	97
McMichael	113	78	136	88	166	95
Miller	95	76	165	93	166	91
Mitchell	113	90	160	94.5	148	97
Newton	111	88	143	96	160	97
Stowe	97	78	154	89	165	93
Baldwin	103	73	133	92	165	93.5
Benson	86	82	136	87	167	93
Childs	81	64.5	118	88	151	88
Drexel	91	67	117	84	135	94
Durham	108	74	154	88	151	94
Logan	85	80	132	99	156	93
Morton	107	76	116	91	164	96
Wayne	128	80	152	84.5	168	93
Furness	107	71	158	89	182	88
Hay	97	52.5	127	86	158	89.5
Read	92	56	149	84	160	92.5
Sharswood	107	86.5	155	86	164	91
Southwark	78	33	117	84	159	87.5
Taggart	118	86	152	88	193	93.5
Weccacoe	121	70	149	86	173	91
Welsh	108	56	134	86	192	91
Wilson	105	75	137	71	158	89
Bridesburg	115	69	132	88	177	84
Disston	94	83	...	....	162	95
Fox Chase	95	88	118	95	130	97
Franklin	111	88	147	91	162	95
Hackett	93	82	147	92	182	87
Longfellow	107	86	158	91	162	92
Martin	93	78	121	73.5	163	91
Webster	80	64	132	89	160	95
Willard	113	84	155	93	176	92
Bache	128	89.5	155	87	184	92
Blaine	98	87	118	94	178	94
Claghorn	135	72.5	160	93.	185	95
Hanna	115	88	160	87	177	93
Overbrook	154	92	123	94	156	95
Pierce	121	85	136	90	154	92
Reynolds	93	85	113	92	157	91
Stanton	122	87	154	91	189	93
Whittier	97	88	163	96	193	96
Hancock	125	82.5	169	92	156	96
Hawthorne	80	84	115	88	125	94
Jefferson	...	....	...	....	156	95
Kearney	97	84.5	155	88	...	....
McCall	...	....	144	85	177	93
Northeast	120	86.5	163	94	193	94
Northern Liberties	113	77	143	92	164	93
Vaughn	119	82	162	87	149	85
Widener	97	84.5	140	93	157	93
Howe	98	85	153	93	163	97
Lowell	101	79	144	96	182	94
McClure	126	86	141	94	172	96
Muhr	143	87	153	92	176	96
Sheridan	111	83	130	90	180	97
Stetson	118	85	157	92	170	94
Taylor	92	82	158	90	170	96
Tilghman	97	94.5	135	92	143	96
Welsh	140	86	152	92	...	....
Cleveland	127	88.5	157	85	183	95
Cook	93	85.5	157	93	186	94
Fitler	117	93.5	...	....	...	....
Gilbert	81	84	153	92.5	177	95
Hill	59	74	...	....	...	....
Kenderton	109	82	173	92	159	94
Manayunk	124	84	151	89	167	97
Mt. Airy	93	90	...	....	160	95
Wissahickon	105	87.5	165	94	167	96
Courtis Standards	113.	78.	145.	89.	168.	93.

TABLE 3

COURTIS SILENT READING TEST

	Grade 3 B.		Grade 4 B.		Grade 5 B.	
	Words per Minute.	Index of Comprehension.	Words per Minute.	Index of Comprehension.	Words per Minute.	Index of Comprehension.
District I	107.0	88.9	140.2	92.4	167.0	95.7
District II	96.8	74.7	129.2	89.4	160.0	93.9
District III	103.6	69.6	142.5	86.0	169.6	91.1
District IV	98.8	82.0	141.8	90.3	165.3	93.4
District V	121.6	86.0	143.1	92.3	188.6	91.2
District VI	107.9	83.6	147.5	91.0	161.0	93.2
District VII	110.7	86.5	146.0	92.5	172.1	91.8
District VIII	102.8	87.1	159.7	91.2	170.9	95.7
City Total	105.6	82.6	143.0	90.9	168.0	94.3
Courtis Standards	113.	78.	145.	89.	168.	93.

this, his paper is given a rate score and a comprehension score. The rate score has been so chosen that it represents the number of words per minute when reading carefully. The comprehension score represents a measure of the pupil's ability to understand what he reads. In finding this every exercise is counted as wholly right or wholly wrong.

The median rate and median comprehension for the grade are found by taking the score for each from the paper above which lie half the class scores and below which lie half the class scores.

4. The Results in Philadelphia. The results by schools are given in Table 4. The median rate and the median comprehension scores for the eight districts, for the city as a whole, and for the Monroe Standards are given in Table 5.

What has Been Found Out. The tests as given are tests of reading to the extent that they measure such phases of it as the rate and accuracy of pronouncing words in sentences and the rate and accuracy of comprehending related and independent paragraphs. They have not attempted to test such important phases of reading as the ability to read and retain or read and appreciate. They merely show what happened in the reading of certain printed matter under certain procedure. But wide experimentation has given to such happenings a reliable comparative value.

For the city as a whole the median of comprehension in silent reading is high. In oral reading the average scores are not so good, especially for the first three grades. The time allotment indicates that importance is attached to reading in Philadelphia. The marked variation in scores for both districts and individual schools presents an interesting study in administration and supervision.

TABLE 4

School.	Grade 6 B.		Grade 7 B.		Grade 8 B.	
	Median Rate.	Median. Comprehension.	Median Rate.	Median Comprehension.	Median Rate.	Median Comprehension.
Belmont	101	18	133	24	133	29
Dunlap	101	21	...	....	133	29
Harrity	101	24	...	....	...	....
Huey	89	17	133	27	133	29.5
McMichael	101	20	133	26	133	28
Miller	101	20	...	....	...	....
Mitchell	133	24	152	32	141	29
Newton	115	21	115	25	162	35
Stowe	101	20.5	133	26.5	141	28
Baldwin	101	19	133	28	152	30
Benson	124	27.5	115	24	142	28.5
Childs	101	18	115	20.5	133	27
Drexel	...	....	...	....	124	23.5
Durham	101	20	...	....	...	....
Logan	101	17	101	19	101	20
Morton	89	16	...	....	...	....
Read	101	16	115	24	141	29
Wayne	115	20	124	25	133	28
Furness	101	18	101	22	115	24
Hay	101	18	115	24	141	28
Read	73	13	...	....	...	....
Sharswood	115	23	...	....	...	....
Southwark	115	16	133	28	141	32
Taggart	95	15	...	....	...	....
Welsh	124	20.5	141	28	141	30
Wilson	101	17	...	....	115	28
Bridesburg	101	16	115	19	115	26
Disston	101	20	115	20	115	21
Fox Chase	115	19	108	22	115	28
Franklin	115	21.5	101	20	...	....
Hackett	115	20	...	....	...	....
Longfellow	133	25	152	28	133	30
Martin	115	21	...	....	...	....
Webster	115	24	141	30	141	32
Willard	101	20	101	24	...	....
Bache	115	21.5	115	25	162	36
Blaine	101	20	...	....	...	....
Claghorn	146.5	26	...	....	...	....
Hanna	133	24	133	28	152	33
Overbrook	115	25	141	32	145.5	35
Pierce	133	26	115	24	...	....
Reynolds	101	16	89	20	95	20
Stanton	101	19	115	23.5	162	37
Whittier	115	24	133	28	141	32
Hancock	101	20	153	26	133	32
Hawthorne	115	18.5	101	20	101	20
Jefferson	101	23	115	24	133	26
Kearney	115	20.5	133	27	152	32
McCall	115	20	115	22	115	24
Northeast	115	23	133	28	141	35
Northern Liberties	115	20	...	....	...	....
Vaughn	115	21	...	....	...	....
Widener	115	16	...	....	...	....
Howe	115	26	101	22	141	32
Lowell	124	26	133	30	133	32
McClure	101	20.5	101	20	...	....
Muhr	101	18	101	21	141	32
Sheridan	115	21	141	28	141	30
Stetson	101	21	130	24	141	30
Taylor	115	22	115	24	115	28
Tilghman	101	19	115	24.5	...	....
Welsh	115	26	...	....	152	38
Cleveland	141	28	115	24	133	28
Cook	141	26	133	25	152	31
Gilbert	101	19.5	101	20	133	30
Kenderton	115	23.5	137	29.5	133	28
Manayunk	115	18	133	24	133	26
Mt. Airy	115	24	133	28	141	29
Wissahickon	115	20	115	25	137	32
Monroe Standards	116.	18.1	130.	26.0	13[illegible].	28.2

TABLE 5

	Grade 6 B.		Grade 7 B.		Grade 8 B.	
	Median Rate.	Median Comprehension.	Median Rate.	Median Comprehension.	Median Rate.	Median Comprehension.
District I	106.9	15.5	135.8	27.6	138.5	30.2
District II	105.4	19.5	115.2	23.9	136.2	27.4
District III	104.9	17.7	111.0	25.7	135.4	28.3
District IV	103.6	21.7	117.1	24.7	138.9	27.2
District V	112.0	23.4	118.3	26.5	147.2	31.9
District VI	112.1	20.3	118.5	25.7	134.5	27.8
District VII	110.2	22.9	118.0	25.6	140.1	30.7
District VIII	108.4	24.2	119.8	24.8	138.3	29.3
City total	110.8	20.9	119.4	25.7	137.6	29.3
Monroe Standards	116.	18.1	130.	26.0	133.	28.2

RECOMMENDATIONS ON ENGLISH INSTRUCTION IN THE ELEMENTARY SCHOOLS*

1. Steps should be taken to reduce the size of classes in the primary grades. Teachers of the best skill and experience should be assigned to Grade 1.

2. A committee should be appointed to prepare a detailed course of study in primary reading to be used throughout the city.

3. Skilled supervision for primary reading and language should be provided for city-wide service and should be directed from the office of the Superintendent of schools.

Organization in the English Department of the High Schools.—Superintendent's Office. There is scheduled by the associate superintendent in charge of secondary education in Philadelphia a general constant of four periods of English a week to cover the four years of the high school curriculum. No course of study, however, is outlined by the central office to cover these four required units in English for the eleven senior high schools of the city. Nor is there any working arrangement by which the associate superintendent's office inspects the character and scope of the English work based on this core of uniform time allotment. In practice there is no common terminology to indicate in what year and semester of the English course the pupil may be enrolled. For example, an "11-A" pupil in the general English constant of the associate superintendent's curriculums may be a "fifth form" pupil in one high school, a "D" pupil in another school, and a "B" pupil in a third school. Again, there is no definite working plan for articulating the high school English work with that of the elementary grades.

* See Addendum.

There is now nothing beyond a very nominal direction of the high school English work by the central office. Each individual school in practice determines its organization, course of study, and the character of its classroom instruction.

A large proportion of the English departments are well organized and administered with a good average of work; but this is not true of all of them. Unless the local English faculty determines to do so of its own volition, however, there is no way of bringing about an improved condition in an inefficient English department.

Heads of Departments. In January, 1921, when this survey was being made, each high school, except Kensington, had a head of its English department. This head is elected by a majority vote of the Board of Public Education. In seven of the schools he is provided with an office.

An English department head is regarded as an administrative officer, a supervisor, and a classroom teacher. The following duties are to be performed: formulation of a course of study, distribution of work among the teachers and standardizing their promotion of pupils, estimating textbooks and supplies, visiting classrooms, assisting the principal in judging the work of the teachers, meeting his teachers in conference to discuss professional matters pertaining to the English department. He is also a classroom teacher, but the amount of time devoted to this varies greatly in the different schools. The average is about fifteen periods of teaching a week; yet one head teaches twenty-five periods.

Teaching Periods and Distribution of Pupils. The rosters indicate that English teachers average twenty-one teaching periods a week and meet an average of 180 pupils. This number of pupils varies from 130 in one school to 220 in another. Throughout the country the average number of pupils assigned to an English teacher is 130.

Rooms and Equipment. Many of the classes visited were in overheated rooms not well suited either to work in composition or in the reading of literature. The lighting is often poor. With the exception of a few rooms that were supplied with tables and chairs, the rooms were generally equipped with fixed desks, spaced too close, or with an excessive number of fixed arm chairs. There is a general lack of blackboard space for composition work.

The supply of textbooks, including supplementary readers, is adequate. The pupils buy their own English note books. The supply of reference English books for the individual rooms is not adequate for the use of pupils, when the importance of such books in English instruc-

tion is considered. Where rooms are supplied with book collections, they are selected largely for the use of teachers.

Library. A library is a necessary laboratory for English and should be a part of high school equipment. When English teachers were asked what would do more to improve the work of their high schools, they generally suggested a well stocked library in charge of a trained librarian. With the exception of three schools the English teachers have no high school library.

Coöperation With Other Departments. It is difficult for any teacher in a school to teach successfully the speaking and writing of English unless every teacher is attempting to do so. Good language is a daily habit depending on the united efforts of all teachers. No plan for coöperation in English for other subjects is now being carried out in the Philadelphia high schools. Steps in this direction should be taken by the department heads in all subjects.

Course of Study.—How Prepared. Each high school prepares its own course of study in English largely in accordance with the ideas of the head of the department. As a result, there are in the senior high schools of the city eleven different courses of study, several of which are very good. Though the courses have many characteristics in common and are made with an approximate regard for the four-period requirement of the superintendent's office, yet they are dissimilar enough to make transfer from one school to another a distinct loss to the pupil's English work. It is understood that an English course must be built on the idea of adaptability to local needs; but this principle ought not to disregard the fact that there are certain desirable attainments that should become fundamental aims in any course of study in English.

General Trends. It is not necessary to give details on the content of the eleven English courses of study that are available in manuscript form; but a few general trends in them may be noted:

1. The time allotment for literature is heavier than it is for oral and written constructive composition.

2. The content of the literature courses does not differ greatly from that prescribed from time to time by the College Entrance Board. On the whole it is commendable, except for the tendency to include a few books of adult interest, or needing adult experience to interpret and enjoy. One head of a department makes this frank marginal comment on a group of readings: "Satire and other classics that otherwise seemed out of place elsewhere." Commendable attention is given to Shakespeare and to Old Testament narratives. The modern

novel, the modern short story, and modern poetry are well provided for in some of the courses, no doubt on the sound theory that what young people will read anyway they ought to be trained to select and read wisely.

3. Much of the composition is formal written work based on themes taken from literature rather than on actual experiences and interests of pupils.

4. There is an excessive amount of time given to a formal study of the structure of the language. Instead of grammar and rhetoric finding their meaning in composition activities, they are emphasized merely as objects of interest and worth in themselves. Technique seems to be sought more for its own sake than for that of improving spoken and written English. Skill in this technique is looked for from drills apart from interesting and valuable content.

5. Some of the courses in stressing the formal and historic structure of the language do not adequately provide for such practical social usages of the language as letter writing.

6. Most of the courses as arranged and as carried out in practice have a prevailing college cast that is formal and critical in procedure. Some of them seem "stalled" on the anatomy of the language and do not adequately provide through four years for a continued and progressive practice in speaking and writing. The faith of a considerable portion of the English teachers in the inherent virtues of technical grammar, in the face of much evidence of its lack of effectiveness, is very noticeable. They go so far as to insist on a return to much teaching of it in the elementary schools where it has largely given place to practical oral and written composition.

7. The courses of study in English have largely been made to meet the needs of the students who will pursue an academic curriculum and who expect to go to college or to normal school. Their adaptability to pupils pursuing commercial, mechanic arts, and household economics curriculums has not always been provided for. There is a noticeable tendency in some of the courses to provide for the training of specialists in the further pursuit of language study rather than for the training of users of English in a social content and by social methods of acquirement. The commonly accepted principle that English work should be planned to be good to the extent to which it is pursued has not been kept in mind in the making of courses.

8. No well planned provision, except in one school, is made in the courses so far as they relate to English, for vocational guidance through composition, an unusually interesting and fruitful field. But the extra classroom activities are well taken care of, especially in the girls' schools. Each school has a journal. Many of them have some form of debating,

literary, or dramatic organization. The interest in dramatic production is very noticeable and commendable. The general participation of pupils in assembly exercises is also very commendable.

Classroom Instruction.—Teachers. Visits were made to fifty-four English classrooms in Philadelphia. Of the teachers visited many, in the judgment of the surveyor, were doing as good work as could be found anywhere and some were doing as poor work as could be found anywhere.

In nearly every case the teacher has had a good academic training in the subject of English as the colleges have given it. Some have traveled and are of ripe scholarship; some have investigated and published; some have even made original literary contributions; many are refined in voice, poise, and address—yet the work of many teachers visited, some of much experience, could not be ranked above average.

Recitations. Four types of English periods were observed:

1. Definitely planned recitations, moving along with alert interest and participation on the part of the class, and effectively "arriving" by the end of the period.
2. Periods of aimless drifting without order, thoughtful attention, or active participation on the part of the class.
3. Organized classes in schools for girls, working on projects such as dramatization and debate and carrying them out unusually well.
4. Lectures on literature to very large classes in schools for boys.

A few examples of the first type of English work are here given:

An effective quiz on the Witch scene in Macbeth with a class of boys by a teacher who not only knows his subject but knows how to teach.

A skillful development from the blackboard of correct form in dialogue by a teacher who plans her work and is a good judge of values.

A suggestive assignment by a thoughtful teacher of the collateral reading for the term to a group of commercial girls.

Constructive criticisms by a tactful teacher of paragraphs written on the blackboard by a class of girls that knew how to work.

An alert, prompt class of boys studying the "Tales of a Wayside Inn" under a teacher of good appearance, voice, sense of humor, and initiative.

Well planned development of business letters with a class of girls, by an accurate teacher who is well informed on actual business usage.

A very good first recitation with a class of boys beginning the study of Shakespearean plays with an exact and effective teacher who has many practical suggestions to make on theater-going.

Here are a few recitations of the second type:

A reading in turn, around a class of boys, of Pilgrim's Progress on a bright day with the window shades down and the electric lights on, and an occasional comment by the teacher that could not be heard by reason of the confusion.

A stifling, noisy classroom with a random questioning by the teacher of a class of boys who answered in concert on the history of literature.

A formal lesson in oral composition on topics taken from literature by a class of girls who looked bored and took the work as a joke.

A period in composition in which carelessly written manuscripts were read aloud by the teacher and were corrected by the class of boys as they slouched in their seats and called out in concert answers to random and trivial remarks by the teacher.

The periods in which project lessons were carried out profitably are now noted:

A very skillful dramatization in a classroom for one period of the Malvolio scene from "Twelfth Night" by a class of girls, organized with a manager, and having devised their own costumes.

An excellent debate by a twelfth grade class of girls, who had been taught to think on both sides of the immigration question by a teacher who is a student of the art of teaching.

This example illustrates the fourth type of English period:

A lecture on "De Quincey, the Opium Eater" to a couple of hundred inattentive lower-class boys.

Professional Attitude. 1. The professional attitude of heads of English departments and teachers toward each other was with two exceptions found to be very good. The following replies by teachers as to how heads of departments had been of help to them will indicate something of the professional attitude that exists:

"By letting me alone. I have been an English teacher for 18 years; 12 in some of the great schools of the middle west. Why further inspection?"

"Her personality and high professional standards have been our greatest incentive to good teaching."

"By making the minimum requirements of each semester more definite and by helping to systematize my methods of instruction."

"By intimate association with a cultured gentleman who is also a great teacher."

"She has called attention to changing theories of education and has suggested lines of study in the pedagogy of English."

"By having the wisdom to allow experienced and conscientious teachers a large measure of liberty."

"His criticism is neither destructive nor petty."

"He has given me freedom to experiment."

2. Something of the professional outlook on English classroom teaching may be gathered from the following sampling of replies by teachers when asked to make suggestions for improving either their own work or that of the school:

"Definite criticism by head of department so that I may know why I am successful and in what ways I may improve."

"Work all right. Does not need to be improved."

"Need well equipped individual classrooms."

"Strict supervision and frank criticism by department head."

"Pay me more money."

"More frequent department meetings and more uniform requirements for the city."

"More coöperation between departments and more visiting and observation."

"Introduction of standard tests."

"Project method in literature."

"Badly in need of supervision."

"Less supervision, inquisition, professional reading, and meetings. Admit pupils from grades on examination."

"More money, a sabbatical year, clerical help, and teachers given a larger part in determining policies of administration."

"Variation in roster from term to term."

"Smaller classes." (A very common suggestion.)

"A library and trained librarian." (A very common suggestion.)

"Five periods of English a week." (A very common suggestion.)

"Coördination between departments, class and teacher to remain together for at least a year, and an opportunity for good students to go as fast as they can."

"Separate classes and instruction for composition and literature."

3. A third phase of the more general professional attitude is indicated by the replies of teachers themselves in regard to professional meetings and professional literature. There appears to be a lack of attendance upon professional meetings and a lack of interest in professional literature dealing specifically with English or with the broader aspects of the education of secondary youth.

RECOMMENDATIONS

1. The Board of Public Education should delegate to the Superintendent of Schools administrative authority and supervisory help in order that equal opportunities for effective high school English study may be offered in the eleven senior high schools.

2. There should be an equalization of opportunities for heads of English departments by a uniform assignment of duties and a uniform teacher supply in proportion to enrollment.

3. Each high school should have for its English laboratory the use of a well equipped library under the charge of a full-time librarian, academically as well prepared as any other member of the faculty and receiving equal pay.

4. A course of study in English should be prepared by a committee for the high schools of the city. Such a course should approach the point of view set forth by the "National Joint Committee on the Reorganization of English in the High Schools." It should also articulate with the present elementary course in English in Philadelphia.

Holmes Junior High School.—Organization. For a student body in the Holmes Junior High School of about 1600 there are eight teachers of English, one of whom teaches part-time. There is a time allotment for pupils in English of five periods a week, forty-five minutes in length.

One of the teachers is designated as chairman of the English department. In addition to administrative duties similar to those of the head of a department in a senior high school, the chairman of the department teaches fifteen periods a week.

Course of Study.—Preparation. The English course of study being put into use at the Holmes Junior High School was prepared by the chairman and the teachers of the department. In the arrangement of the course due regard was given to articulation with the elementary course of study in English. Effort was also made to have it articulate with the work in English in the senior high schools; but as each senior high school has its own course of study such an adjustment was only approximate.

Time Distribution. The time devoted to the different phases of the English work is indicated by the following schedule:

	Periods Per Month
Oral English (in the auditorium)	4
Written English (in the classroom)	4
Literature (in the classroom)	7
Language Study (in the classroom)	2
Use of Books in the classroom)	1
Grammar (in the classroom)	2

Content.

a. Oral English: Auditorium talks on subjects assigned and organized in the classroom. Emphasis on subjects related to vocational aims and interests and to guidance

for leisure. Dramatic presentations and literary programs.

b. Written Composition: Instruction on the organization of material in approved form. Emphasis on letter writing and themes bearing on educational guidance. Incidental teaching of spelling.

c. Literature: Classification:

(1) Short specimen of prose and poetry, read in class.

(2) Longer units, read also in class.

(3) Books read at home by the individual members of the class.

Three periods per month are devoted to the first division and two to each of the other divisions.

d. Language Study: Lessons on synonyms, word derivation, pronunciation, enunciation, colloquialisms, slang. Lessons on sentence structure.

e. Use of Books: For reading and consultation, specific use of the dictionary, use of the daily paper and magazines, use of the library.

f. Grammar: Definite, systematic functional grammar.

g. Extra Activities: The school magazine, the dramatic club, the debating club, the poets' club, the literary society.

The course of study is in measurable accord with the plan that has been laid down elsewhere in this report on the organization of junior high school programs of study. The principal contention of this plan is that the English work should be of definite value to both the pupils who drop out and the ones who remain. It cannot be directed to grammar designed as a basis for future foreign language study. It must be good as far as it goes in the practice of talking, writing, and reading. It must be motivated in pupil activity. As the junior high school is an exploratory period, the content of English must give due regard to vocational guidance.

The course of study in English for the Holmes Junior High School is a commendable effort in experimentation under difficult conditions. The experiment is one of importance; but it should lead to further coöperative consideration and adjustment for the organization of future junior high schools in the City.

Classroom Instruction.—Teachers. All of the teachers have had experience in the elementary grades. All are graduates of the Normal School. One has a college degree and four are studying for such degrees.

Recitations. Five classrooms were visited, four of which were doing very good work. The recitations were well planned and the

pupils were participating in a good spirit. One recitation developed the idea of a paragraph, one developed an outline for a composition on how to make a swing, one presented in a clear way the difference between poetry and prose, one had to do with a classic used for study.

Professional Spirit. On the whole the professional attitude of the teachers is excellent. They are attacking their problems with zest, are doing it thoughtfully, and are coöperative in their procedure. They are alive to the possibilities of extension work while in service. They recognize the possibilities of guidance through English work during the exploratory junior high school period.

The teachers and chairman of the English department of the Holmes Junior High School are engaged in successful experimentation on a junior high school course of study in English.

Recommendation. A committee should be appointed to draw up a uniform course of study in English for junior high schools in the City of Philadelphia. Such a course should be based on the general principles laid down in the report on "Reorganization of English in Secondary Schools." It should articulate with the English course of study in the elementary schools and also with the senior high schools.

English Tests in High Schools. Three standardized tests in English were given in the high schools: the Briggs Form Test; the Seven S Spelling Test; and a composition on the subject, "The Most Exciting Moment in My Life," scored by the Hudelson Scale. Dr. Thomas H. Briggs of Teachers College directed the giving of the tests, tabulated the scores, and has discussed the results.

English Form Test. This is a test in which the pupils are required to insert in twenty printed sentences necessary corrections in fundamental forms: (1) a capital at the beginning of a sentence; (2) a period at the end of a declarative sentence; (3) an interrogation mark after a question; (4) a capital for a proper noun; (5) a period and capital in the middle of a run-on sentence; (6) an apostrophe of possession; and (7) a comma before *but* introducing the second member of a compound sentence. To minimize penalites due to carelessness, there are five separate opportunities to insert each correction. Although not so accurate in measuring ability in these details as dictation, the test is sufficiently reliable as an index of efficiency in certain phases of English teaching. Moreover, it is very economical to administer and to score.

The test was given in all the high schools, except the West Philadelphia High School for Boys, to representative pupils in the low IX and low X grades. The 1145 younger pupils had just entered the high schools, and in consequence their scores really are indexes of the efficiency

of one phase of English work in the elementary grades. The 681 tenth grade pupils are those who persisted through one year of high school instruction: some of their improvement in scores is due to what they have learned in this year and some doubtless to the survival of the superior pupils.

Table N shows that the pupils who have completed the elementary grades in Philadelphia and have entered the high schools are somewhat less proficient in finding and correcting fundamental errors in printed English than are pupils in other cities. They make two errors in a hundred more than the pupils who determined the standards. Only in inserting a terminal question mark and a comma before *but* are they slightly above standard. In the use of the apostrophe of possession they are inferior by 111 errors in a thousand.

TABLE N.—SHOWING PER CENT OF ERROR IN ENGLISH FORM TEST, BY SCHOOLS, BY SEMESTERS, AND BY DETAILS

Schools.	1	2	3	4	5	6	7	Total.
Central H. S.:								
Low IX	1.6	3.4	14.0	58.1	32.4	70.0	18.3	28.2
Low X	1.1	6.0	15.3	48.2	15.3	57.2	20:2	23.9
H. S. for Girls:								
Low IX	1.7	3.6	7.0	65.8	41.9	67.8	16.1	30.5
Low X	0.5	1.4	2.8	52.0	20.0	51.6	18.6	21.0
South for Boys:								
Low IX	0.5	1.6	3.9	45.6	39.8	64.1	13.0	24.0
Low X	0.3	5.9	10.0	65.2	49.3	71.8	27.9	33.4
South for Girls:								
Low IX	3.4	3.7	8.0	49.2	38.8	68.8	17.6	27.1
Low X	1.5	1.8	4.7	61.4	22.6	51.6	13.1	22.5
West for Boys*	....	....	....	....	....	....	....	....
West for Girls:								
Low IX	0.9	2.9	3.2	69.0	31.6	68.0	21.3	28.2
Low X	1.0	3.3	6.2	59.5	23.1	55.4	25.9	24.9
William Penn:								
Low IX	2.0	3.3	10.3	67.8	39.2	73.0	19.2	30.7
Low X	2.1	3.1	5.5	69.0	22.8	61.0	21.4	26.4
Kensington:								
Low IX	3.0	1.5	7.0	62.2	38.9	58.5	21.4	27.4
Low X	0.0	0.9	4.5	62.8	29.1	63.6	23.6	26.7
Germantown:								
Low IX	0.3	3.4	5.2	50.8	17.3	65.8	16.3	22.7
Low X	0.0	1.8	1.1	31.4	15.0	41.5	12.1	14.7
Frankford:								
Low IX	0.3	2.2	8.9	45.4	40.0	75.0	13.1	26.4
Low X	0.0	2.2	5.8	50.6	12.0	58.2	15.6	20.6
Northeast:								
Low IX	0.0	20.7	10.7	38.4	31.5	59.4	15.1	25.7
Low X	0.5	1.1	7.6	29.6	13.2	44.6	15.2	16.0
Average Philadelphia:								
Low IX	1.4	2.8	7.8	55.2	35.1	67.0	17.1	27.1
Low X	0.7	2.8	6.4	53.0	25.3	55.7	19.4	23.0
Standards:								
Low IX (February)	1.3	2.2	10.4	51.2	33.9	55.9	22.8	25.1
Low X (January†)	0.7	8.1	2.6	45.9	23.6	49.4	21.3	21.7

* No report.
† Baltimore only.

When the scores on the separate details are considered, there are found considerable variations in the different high schools, due chiefly, it is to be presumed, to the work of the elementary schools that prepare for each and the clientele from which each one draws.

The pupils who have been in the high schools for a year made 4.1 errors in the hundred fewer than did the entering classes. This is the net improvement due to the teaching of English in the high schools and to the elimination of inferior pupils. How much is due to each cause no one can say.

It would seem to be the duty of the high school teachers of English, however, especially in view of their repeated complaints of the preparatory work in the grades, to make an earnest effort in the first year to eradicate fundamental errors in English, the persistence of which so mars all written expression. The only material reductions found in the per cents of errors are in the correction of run-on sentences and the insertion of apostrophes of possession—two of the more important details. The pupils of the tenth grade in the South High School for Boys, however, do worse in these details than do the entering classes. As a matter of fact, the tenth grade of this school makes a higher percentage of errors in every detail but one than does the ninth grade. Kensington and West for Girls pupils also make little improvement, while the pupils in Northeast, Girls, and Germantown show most improvement.

Of course the elementary schools should have eradicated most of these errors. Certainly the high schools have a right to expect that entering pupils shall uniformly begin a declarative sentence with a capital letter and end it with a period, that they shall be able to detect a run-on sentence and correct it, etc. But having admitted the pupils as prepared, the high schools assume the obligation to teach even such elementary practice; progress cannot be assured by attempting advanced work where fundamental matters are weak. There would be time for eradicating—at least to a reasonable degree—such fundamental errors as the test concerns if the high schools did not insist on the elementary schools teaching so much formal and impractical grammar. When the present elementary course in English becomes established, with its elimination of impractical formal grammar, pupils will no doubt enter the high schools with better habits in correct form.

The standards for Low X are from only four high schools in Baltimore and are derived after the pupils had completed a year and a half of work. Philadelphia is on the whole inferior to Baltimore.

Spelling Test. Twenty words from a highly standardized test were given in all the high schools, except West for Boys, to a total of 5429 pupils distributed through the eight semesters. List IV of the Seven S Spelling scale was given to grades nine and ten; List XIV, considerably more difficult, to grades eleven and twelve. The scores are reported in Table O. With the exception of one class in the Central

TABLE O.—SHOWING PER CENT OF CORRECT SPELLINGS BY SEMESTER, WITH STANDARDS

Schools.	Low IX.		High IX.		Low X.		High X.		Low XI.	
	Number Passing.	Per Cent Correct.	Number Passing.	Per Cent Correct.	Number Passing.	Per Cent Correct.	Number Passing.	Per Cent Correct.	Number Passing.	Per Cent Correct.
Central	230	84.0	163	87.2	96	90.5	84	92.0	76	76.3
High for Girls	77	87.1	67	84.4	47	93.3	47	93.3	23	93.3
South for Boys	108	85.7	79	91.5	68	91.8	34	92.1	63	71.8
South for Girls	100	83.1	60	85.5	39	95.6	42	88.8	56	76.3
West for Boys*	...	....	...	....	...	....	...	....	...	....
West for Girls	193	78.4	97	86.1	117	90.3	120	92.9	100	84.3
William Penn	123	84.6	111	87.2	70	87.1	66	90.5	57	68.0
Kensington	58	84.6	59	94.9	32	90.5	36	94.0	19	80.4
Germantown	199	89.4	195	87.6	131	88.0	116	94.2	52	79.1
Frankford	80	80.0	51	82.6	77	87.8	97	95.9	61	65.1
Northeast	116	87.0	77	81.0	65	88.4	55	88.6	42	76.0
Average Philadelphia	...	84.4	...	86.8	...	90.3	...	92.2	....	77.1
Standards (February)	...	76.9	...	80.0	...	82.5	...	85.0	...	64.3

* Test not given.

TABLE O.—*Continued*

Schools.	High XI.		Low XII.		High XII.		Average.	Rank.
	Number Passing.	Per Cent Correct.	Number Passing.	Per Cent Correct.	Number Passing	Per Cent Correct.		
Central	42	62.6	37	81.6	31	90.8	83.1	6
High for Girls	28	80.7	24	83.1	23	88.9	87.9	2
South for Boys	64	92.4	0	....	18	93.6	88.4	1
South for Girls	27	73.0	33	74.0	27	75.0	81.4	8
West for Boys*	..	....	..	....	..	....	....	..
West for Girls	88	79.6	54	85.0	48	76.4	81.4	5
William Penn	66	68.5	71	70.1	62	80.5	79.6	10
Kensington	28	87.4	36	81.8	30	87.5	87.6	4
Germantown	38	85.5	24	90.4	76	87.2	87.7	3
Frankford	69	74.3	30	72.7	23	79.3	79.7	9
Northeast	41	77.1	37	76.6	23	80.7	81.9	7
Average Philadelphia	..	78.1	..	79.5	..	84.0	....	..
Standards (February)	..	67.1	..	69.1	..	72.1	....	..

* Test not given.

High School, the pupils in each semester of all the high schools in Philadelphia surpassed the standards. On an average in grades IX and X they misspell 74 fewer words in a thousand than do pupils in other cities, and in the eleventh and twelfth grades, 115 fewer in a thousand. Spelling is apparently well taught in Philadelphia.

Written Composition Test. In February nearly five thousand pupils, distributed as shown in the accompanying tables, wrote compositions on the subject, "The Most Exciting Moment of My Life." Composition papers are probably more difficult to score accurately than any other in the field of education. During the last decade, however, there has been devised a greatly improved method by which a pupil's product is compared with a series of highly standardized

TABLE F.—SHOWING MEDIAN SCORES (HUDELSON SCALE) IN ENGLISH COMPOSITION BY SCHOOLS AND BY SEMESTERS, WITH STANDARDS. TEACHERS' MARKS

Schools.	High VIII.		Low IX.		High IX.		Low X.		High X.	
	Number Pupils.	Score.	Number Pupils.	Score.	Number Pupils.	Score.	Number Pupils.	Score.	Number Pupils.	Score.
Central	...	....	218	4.58	93	5.47	129	4.98	62	5.58
High for Girls	...	....	81	4.36	52	4.85	70	5.67	21	5.93
South for Boys	...	....	104	4.57	88	4.50	26	5.05	37	6.07
South for Girls	...	....	110	4.46	66	4.67	68	5.00	50	5.56
West for Boys*	...	....	...	....	...	....	...	....	...	....
West for Girls	...	....	99	4.11	101	4.93	113	5.34	104	4.95
William Penn	...	....	...	....	109	4.40	61	5.50	62	5.75
Kensington	...	....	70	5.39	53	4.24	31	5.34	21	5.30
Germantown	...	....	163	5.55	208	5.33	72	5.13	22	5.42
Frankford	...	....	85	3.98	65	5.10	39	5.66	42	5.65
Northeast	...	....	129	4.14	...	....	...	....	48	5.48
Holmes	100	5.72	...	....	100	6.30	...	....	...	....
Totals	100	....	1,059	....	935	....	609	....	469	....
Average Philadelphia	...	5.72	...	4.57	...	4.98	...	5.30	...	5.57
Standard	...	4.54	...	4.64	...	4.80	...	4.96	...	5.16

* Test not given.

TABLE F.—*Continued*

Schools.	Low XI.		High XI.		Low XII.		High XII.	
	Number. Pupils.	Score.	Number Pupils.	Score.	Number Pupils.	Score.	Number Pupils.	Score.
Central	67	5.16	51	6.00	57	6.27	41	5.86
High for Girls	28	5.45	24	5.70	16	5.50	35	6.37
South for Boys	58	5.27	23	5.00	20	6.28	7	6.00
South for Girls	20	5.41	38	6.07	18	6.05	56	6.64
West for Boys*	...	....	...	....	...	....	...	....
West for Girls	68	4.75	64	5.28	44	4.70	50	5.59
William Penn	60	5.30	52	5.76	67	6.20	59	6.29
Kensington	29	5.50	28	5.15	23	6.11	26	5.30
Germantown	37	7.35	139	6.11	49	7.39	41	6.98
Frankford	40	5.35	32	5.35	54	5.61	40	5.75
Northeast	38	5.57	33	5.90	24	6.40	35	6.43
Totals	445	....	484	....	372	....	390	....
Average Philadelphia	...	5.51	...	5.63	...	6.15	...	6.12
Standard	...	5.36	...	5.56	...	5.76	...	5.96

* Test not given.

compositions and given a mark corresponding to that of the sample which it is most nearly like.

Teachers from each of the high schools, after instruction and practice with the Hudelson English Composition Scale, scored all of the papers. Then from ten to twenty-five papers from each semester's product of each school were scored by a highly trained specialist, whose variation from the standards is negligible. The difference between his marks and those assigned by the teachers was used as a correction index. Tables F and G show by semesters the number of pupils writing at each school, the median scores (the score that has an

TABLE G.—SHOWING MEDIAN SCORES (HUDELSON SCALE) IN ENGLISH COMPOSITIONS BY SCHOOLS AND SEMESTERS, WITH STANDARDS. CORRECTED MARKS

Schools.	High VIII.		Low IX.		High IX.		Low X.		High X.	
	Number Pupils.	Score.	Number Pupils.	Score.	Number Pupils.	Score.	Number Pupils.	Score.	Number Pupils.	Score.
Central	...	....	218	3.89	93	4.99	129	4.45	62	5.33
High for Girls	...	....	81	3.86	52	4.35	70	5.17	21	5.20
South for Boys	...	....	104	3.92	88	4.00	26	4.40	37	5.57
South for Girls	...	....	110	5.08	66	4.21	68	4.97	50	5.43
West for Boys*	...	....	...	....	...	....	...	....	...	....
West for Girls	...	....	99	3.31	101	4.63	113	4.59	104	4.30
William Penn	...	....	...	....	109	3.85	61	5.08	62	5.70
Kensington	...	....	70	4.89	53	4.11	31	4.89	21	4.95
Germantown	...	....	163	4.30	208	4.14	72	4.17	22	5.02
Frankford	...	....	85	3.48	65	4.50	39	5.16	42	5.05
Northeast	...	....	129	4.09	...	....	...	....	48	5.18
Holmes	100	5.00	...	....	100	4.50	...	....	...	....
Totals	100	....	1,050	....	935	....	609	....	469	....
Average Philadelphia	...	5.00	...	4.08	...	4.33	...	4.76	...	5.17
Standard	...	4.54	...	4.64	...	4.80	...	4.96	...	5.16

* Test not given.

TABLE G.—*Continued*

Schools.	Low XI.		High XI.		Low XII.		High XII.	
	Number Pupils.	Score.	Number Pupils.	Score.	Number Pupils.	Score.	Number Pupils.	Score.
Central	67	4.56	51	5.05	57	5.72	41	5.11
High for Girls	28	5.12	24	4.99	16	4.45	35	5.72
South for Boys	58	3.82	23	4.45	20	5.35	7	5.57
South for Girls	20	4.02	38	6.20	18	5.63	56	6.29
West for Boys*	...	....	...	....	...	....	...	....
West for Girls	68	3.35	64	4.33	44	4.99	50	4.49
William Penn	60	4.60	52	5.01	67	5.75	59	5.84
Kensington	29	4.83	28	4.40	23	5.90	26	5.10
Germantown	37	5.65	139	5.33	49	5.17	41	5.88
Frankford	40	4.05	32	3.95	54	4.61	40	5.05
Northeast	38	5.32	33	5.10	24	6.35	35	6.08
Totals	445	....	484	....	372	....	390	....
Average Philadelphia	...	4.53	...	4.88	...	5.41	...	5.51
Standard	...	5.36	...	5.56	...	5.76	...	5.96

* Test not given.

equal number lower and an equal number higher) assigned by the teachers, and the median scores as modified by the correction index. It will be seen that as a rule the teachers marked too high, though those at South for Girls and Northeast were very accurate. The larger the number of pupils, the more accurate is the median.

The standards presented in the tables are derived from the scores of pupils in a large number of high schools in different parts of the United States. They are corrected for the time of year and for the subject assigned. It should be explained that 1.00 represents the difference between two compositions that can be perceived by 75 per cent of

TABLE H.—SHOWING DEVIATIONS BY SCHOOLS FROM STANDARDS IN ENGLISH COMPOSITION BY SEMESTERS. ROMAN FIGURES, TEACHERS' MARKS; ITALIC FIGURES, CORRECTED MARKS

Schools.	High VIII.	Low IX.	High IX.	Low X.	High X.	Low XI.	High XI.	Low XII.	High XII.	Average.	Deviation from Philadelphia Average.
Central	....	−0.06	0.67	0.02	0.42	−0.20	0.44	0.51	−0.10	0.21	−0.10
	....	*−0.75*	*0.19*	*−0.51*	*0.17*	*−0.80*	*−0.51*	*−0.04*	*−0.85*	*−0.39*	*0.05*
High for Girls	....	−0.28	0.05	0.71	0.77	0.09	0.14	−0.26	0.41	0.20	−0.11
	....	*−0.78*	*−0.45*	*0.21*	*0.04*	*−0.24*	*−0.57*	*−1.31*	*−0.24*	*−0.42*	*0.08*
South for Boys	....	−0.07	−0.30	0.09	0.91	−0.09	−0.56	0.52	0.04	0.07	−0.24
	....	*−0.72*	*−0.80*	*−0.56*	*0.41*	*−1.54*	*−1.11*	*−0.23*	*−0.39*	*−0.62*	*0.28*
South for Girls	....	−0.18	−0.13	0.04	0.40	0.05	0.51	0.29	0.68	0.21	−0.10
	....	*0.44*	*−0.59*	*0.01*	*0.27*	*−1.34*	*0.64*	*−0.13*	*0.33*	*−0.05*	*−0.29*
West for Boys*	....	....	....	....	....	....	....	....	....	....	....
	....	....	....	....	....	....	....	....	....	....	....
West for Girls	....	−0.53	0.13	0.38	−0.21	−0.61	−0.28	−0.06	−0.37	−0.19	−0.50
	....	*−1.33*	*−0.17*	*−0.37*	*−0.86*	*−2.01*	*−1.23*	*−0.77*	*−1.47*	*−1.03*	*0.69*
William Penn	....	....	−0.40	0.54	0.59	−0.06	0.20	0.44	0.33	0.23	−0.06
	....	....	*−0.95*	*0.12*	*0.54*	*−0.76*	*−0.55*	*−0.01*	*−0.12*	*−0.25*	*−0.09*
Kensington	....	0.75	−0.56	0.38	0.14	0.14	−0.41	0.35	−0.66	0.02	0.29
	....	*0.25*	*−0.69*	*−0.07*	*−0.21*	*−0.53*	*−1.16*	*0.14*	*−0.86*	*−0.39*	*0.05*
Germantown	....	0.91	0.53	0.17	0.26	1.99	0.55	1.63	1.02	0.76	0.45
	....	*−0.34*	*−0.66*	*−0.79*	*−0.14*	*0.29*	*−0.23*	*−0.59*	*−0.08*	*−0.32*	*−0.02*
Frankford	....	−0.66	0.30	0.70	0.49	−0.01	−0.21	−0.15	−0.21	0.03	−0.28
	....	*−1.16*	*−0.30*	*0.20*	*−0.11*	*−1.31*	*−1.61*	*−1.15*	*−0.91*	*−0.80*	*0.46*
Northeast	....	−0.50	....	....	0.32	0.21	0.34	0.64	0.47	0.25	−0.06
	....	*−0.55*	....	....	*0.02*	*−0.04*	*−0.46*	*0.59*	*0.12*	*−0.05*	*−0.29*
Holmes	1.18	....	1.50	....	....	....	....	....	....	1.34	1.03
	....	....	*−0.30*	....	....	....	....	....	....	*0.00*	*−0.38*
Total Philadelphia	....	−0.07	0.18	0.34	0.41	0.15	0.07	0.39	0.16	0.31	....
	....	*−0.56*	*−0.47*	*−0.20*	*−0.01*	*−0.83*	*−0.68*	*−0.35*	*−0.45*	*−0.34*	....

* Test not given.

competent judges; 2.00, the difference that can be perceived by 92 per cent; and so on, the values being determined scientifically.

The tables reveal first of all that the pupils who have just been promoted to high school are in almost every instance below standard, so much so that the conclusion is warranted that the elementary schools in Philadelphia are doing less efficient work in teaching pupils to write English than are similar schools in other cities. Their emphasis on formal grammar, under the old course of study in English, is probably the cause of this weakness as of that in the Form Test. It should be noted that the pupils of the High VIII grade in the Holmes Junior High School, pupils who have been trained in this school since it adjusted itself to its new work, score about as well as those of the High X year of the entire city; and that those in High IX score 0.17 higher than the city average.

A study of the tables and of Table H reveals a drop in the city median score in the Low XI year and small improvement in the High

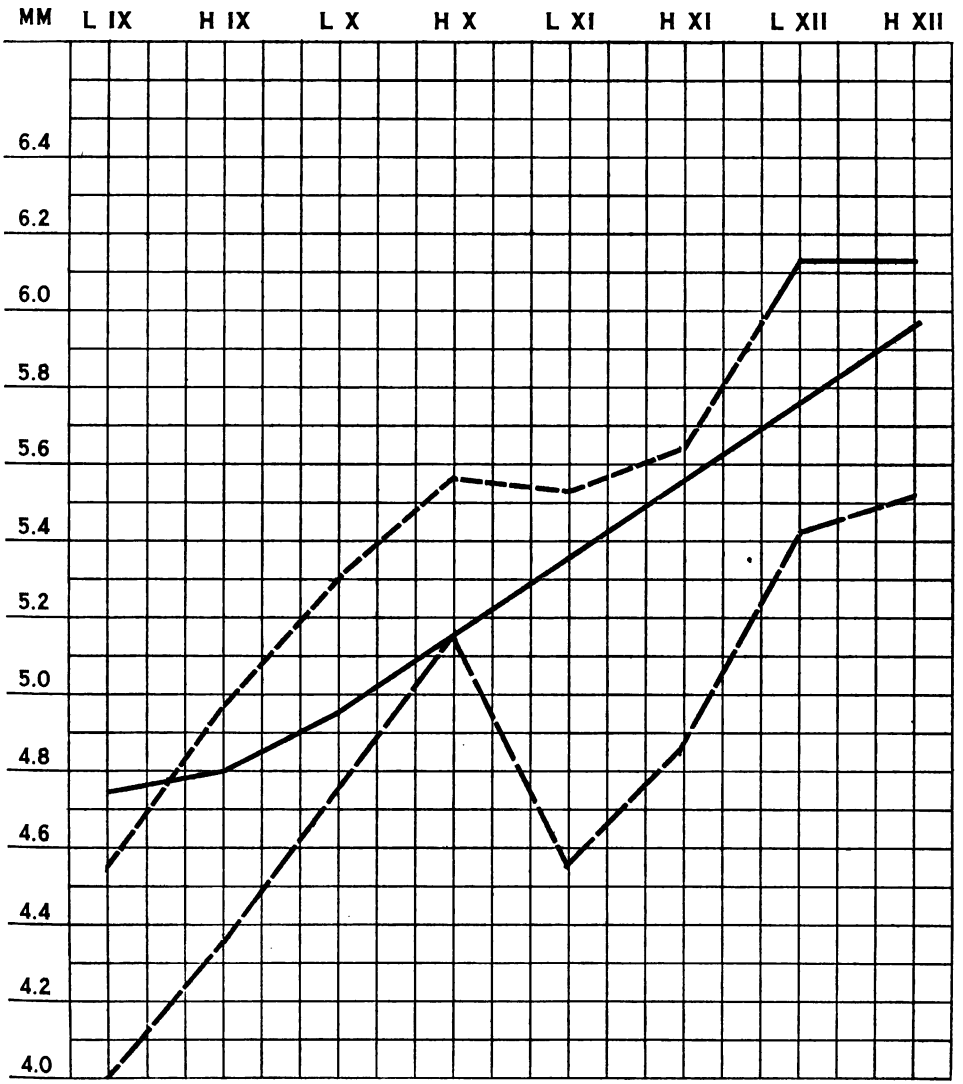


CHART III.—SHOWING STANDARDS FOR ENGLISH COMPOSITION (—), WITH PHILADELPHIA AVERAGES (TEACHERS' MARKS - - - -, CORRECTED MARKS – – –) BY SEMESTERS

XI and High XII. Study should be made of the English courses to ascertain the reason for these results. It is probable that composition is neglected in these years in at least enough of the schools to affect the average for the city. The improvement of the pupils from entrance to the end of the second year is commendable; but obviously good habits of writing are not sufficiently established to persist, even in those pupils, supposedly superior, who remain in school.

The fact that the clientele of the several high schools differs somewhat and that the contributing elementary schools also vary in efficiency makes it dangerous to criticize the schools on their scores alone. The record is presented in the tables for local interpretation and action. Here it will be noted only that West for Girls, Frankford, South for Boys, and Girls High made the worst showing, whether we consider the marks given by their own teachers or those corrected. The rank of the schools doing the best work is not so certain. By the corrected scores South for Girls, Northeast, William Penn, and Germantown lead, in the order given. Table H shows the deviations from standards by each school.

RECOMMENDATIONS

1. More attention should be given in the Philadelphia high schools to English composition so that the pupils write at least as well as the standards for the country and so that there is regular and perceptible progress from year to year.

2. There should be some central supervising authority that will ascertain where the strong work is being done, discover the methods that give the best results, and have them generally used to equalize the educational opportunities of pupils throughout the city.

ADDENDUM

1. The building program now being carried out will, according to the Superintendent of Schools, remedy the crowded condition in the primary rooms.

The Superintendent of Schools has informed the surveyor that a committee has been appointed to prepare a course of study in primary reading.

CHAPTER IV

EXTRA-CURRICULAR ACTIVITIES

The School a Laboratory for Training in Citizenship. A democratic society maintains schools for all the children of all the people in order that succeeding generations of its citizens may be increasingly able to realize the ideals upon which a democratic state is founded. It follows then that the chief aim of public education is preparation for the efficient discharge of the duties and responsibilities of citizenship. Justice John H. Clarke of the United States Supreme Court, in a recent address (February 4, 1922) before the alumni of the New York Law School, called attention to the fact that the 19th amendment to the Constitution of the United States granting equal suffrage had created an electorate larger than has ever successfully governed itself under representative government. The educational implications of this startling fact bring a heavy responsibility to bear upon the administrators of our schools to see to it that our educational system is availing itself of every opportunity and device to realize its primary purpose of preparing young America for efficient citizenship.

Upon no other part of an educational system does this responsibility of preparing young America for efficient citizenship rest so heavily as upon the high schools, particularly the great high schools of our cities. At no other age is the individual so sensitive or responsive to the urge of high ideals as at the age of adolescence. Assembled in our city high schools in groups of two or three thousand or more, these youths of America form a community of junior citizens who will be the determinants of our national future. Whether their citizenship shall be for the weal or the woe of the school now, or presently of the larger community of which they must soon become a part, will depend upon the wisdom and the foresight with which the principal and his staff of teachers organize the manifold interests and activities of this community of junior citizens for training in citizenship.

These interests and activities have always found expression not only in the regular work of the classroom but also in many not less significant ways outside of the classroom; but it is only within recent years that thoughtful students of secondary education have appreciated the educational significance of these outside-the-classroom or extra-curricular activities, as they are called, and organized and directed them for the preparation of junior citizens to assume the duties and responsibilities of adult citizenship. By using the situations and activities in which these young citizens naturally find themselves in

the daily life of the school, many progressive principals have made their schools laboratories for citizenship training, in which girls and boys through participation in the government of the school and in the organization and administration of extra-curricular activities learn to be good citizens by practicing the arts of good citizenship.

Participation under a democratic régime in the government of the school and in the organization of its informal social and club life gives pupils an opportunity to develop those civic ideals and practices that are characteristic of a democracy; whereas non-participation under an autocratic régime develops in pupils either an unthinking submission to, or an habitual evasion of, authority that is characteristic of an autocracy. Pupils in a democratized school learn how to get along with their fellows under conditions similar to those existing in the life of any community. In other words, a democratic organization and administration of the activities of school life recognizes that the life of a public high school is simply a cross-section of the life of the community and as such presents civic problems that are inescapable and for the same reason opportunities for civic training that are unequalled.

Development of Extra-Curricular Activities in the Philadelphia High Schools. As all parents of pupils in Philadelphia high schools and all teachers know, the pupils of these high schools are interested, frequently intensely interested, in activities in connection with the high schools that are not carried on in the regular classroom work. Some of these activities are class organizations, student associations, or councils for participating in the government of the school, "Senates," "Service Clubs," Athletic Associations, "Courts," "Tribunals," Student Assemblies; school publications in the form of magazines, newspapers, "Class Records"; Glee Clubs, orchestras, dramatics, honor societies, hikes, dances, class days, commencement exercises; literary, scientific, departmental, and a variety of other clubs.

Even a partial list of the clubs alone suggests the almost infinite variety of pupil interests. There are the Arts and Crafts Clubs, the Societas Latinas, and the Classical Clubs, sub-chapters of the College Settlement, Health Clubs, Natural History Clubs, Red Cross, Civic Clubs, Debating Clubs, French Clubs, Spanish Clubs, Hebrew Clubs, Modern Novel Clubs, Nature Study Clubs, Needle Work Clubs, Reading Clubs, Sketch Clubs, Social Workers Clubs, Walkers Clubs, Writers Clubs, Camera Clubs, Dancing Clubs, Mathematics Clubs, Seeing Philadelphia Historical Clubs, Knowing Philadelphia Industrial Clubs, Museum Clubs, Philosophic Sections, Science Clubs, Stamp Clubs, Chess Clubs, Wireless Clubs, Radio Clubs, Literary Societies, Nursing Clubs, Art Clubs, Engineering Clubs, and Curtain Clubs. There are

also clubs the names of which do not indicate their character clearly, such as the Owls, the Tir N'au Og, the Spooks, the Triangle, the Inter Nos, the Zu, the I. C., and the Just So Club. After a few days spent in visiting Philadelphia high schools one might repeat from memory many additional pupil clubs and pupil organizations that represent pupils' interests centered in activities other than the regular curricular work of the schools. It is evident even from a partial list of activities and organizations that much of the time, energy, interest, and enthusiasm of the high school pupils is represented in activities not included in regular curricular activities.

At present neither the pupils nor the teachers in a school are by any means willing to let each club run independently of every other club. Therefore, as a result of the work of pupils and teachers there have come to exist agencies for directing all the pupil organizations within a particular school. These agencies take some form of coöperative organization made up of pupils and teachers and are known as a Student Association, or a Service Club, or a Senate and House of Representatives. The Students' Association grants charters to clubs and other organizations and in various ways coördinates the extra-curricular activities of the entire school.

This central Students' Association has not always existed. Some form of club or a series of clubs, especially in the older high schools, came first usually into the boys' high schools as an athletic organization. The first step was the development by the boys of an athletic team which met the teams from other schools in competition. In the course of time some difficulty arose affecting the good name of the school which forced the faculty as a whole to face an embarrassing situation. The solution of the difficulty led to preventive measures for the future. These preventive measures usually were some working agreement between pupils and teachers "not to let it happen again." Some specific necessity was usually the cause in the older high schools for the student organization.

In some cases the teachers of Philadelphia, in common with those of many other cities, have not entirely outgrown the attitude of conceiving an organization of teachers and pupils for directing extra-curricular activities as a preventive. A "don't-let-it-happen-again" scheme was probably a necessary first stage in the older high schools. However, those wise teachers in the Philadelphia schools who interest themselves in pupils' extra-curricular activities know that a negative, preventive type of program outlining what *not* to do, is of little value. These teachers have learned that a positive, constructive program of what to do, worked out by teachers and pupils together, is the one that captures the imagination and wins the allegiance of teachers and pupils alike.

While the aims of pupils and teachers may differ, every wise teacher recognizes that these volunteer pupil organizations are based on the instinctive tendencies of the pupils, and that it is the business of the teacher to arrange the situation so that the pupils want better clubs and develop the ability to satisfy this improved want. The majority of pupils often see the organization as a means of having fun and more fun, of having more chances to play on athletic teams, more chances to appear in print in the school magazine, more dances, more opportunities to do "a good turn" and possibly have public approval focused on themselves, more and better groups of congenial spirits getting together for common purposes in active clubs. Wise leaders, teachers or pupils, on the other hand, see that such organizations are based on instinctive tendencies of gregariousness, of love of approval, of rivalry, of mastery, of adolescent, altruistic effort, and so afford an opportunity for activities that may be fundamentally educative. These leaders know that outside of regular school classes, pupils are going to have organizations of some kind and that these organizations are going to exercise a tremendous influence on the life of the individual and on the life of the school. These leaders know, every parent and every one in a position of authority in or out of school must know, that this extra-curricular phase of school life cannot be neglected. These real leaders know that it is the business of school authorities so to direct these extra-curricular activities that boys and girls will want better clubs for a greater number of boys and girls, better student associations, better athletics for all rather than for a few highly specialized athletes, better school assemblies, better school publications, better class organization for all classes, the lower as well as for the more highly selected seniors; and at the same time these wise leaders know that it is the business of the school to help the boys and girls to satisfy these improved wants.

Since these activities are desirable and the pupils are going to carry them on anyway, it is the business of the wise parent, teacher, or administrator to provide conditions such that the boys and girls not only have better extra-curricular activities, but that these better activities enable the pupils to have a higher ideal of the educative possibilities of these activities in school life. When boys and girls have caught the vision of the higher possibilities of these activities, it is the business of the wise leader so to arrange the situation that in so far as the power lies within the boys and girls, they shall for themselves and for their associates realize this vision.

These real leaders recognize that the mastery of subject matter which is sometimes thought of as the sole aim of education, is not the only or even the most important aim of these extra-curricular activities.

The leader recognizes that while a dramatic or a music club may lead to better individual performance or to a better appreciation of plays or of music, that while a nature study club may start every member toward health and greater happiness, yet as citizens these pupils can be learning even greater lessons. These pupils can be learning in the voluntary associations with their fellows how to coöperate for the common good, how to lead or to select a leader wisely and to follow him, how to assume responsibility and to make good and, where the teachers advise enough but not too much, there is a real opportunity for the development of many of the qualities a citizen must have.

It is the purpose of this part of the survey of the high schools of Philadelphia to ascertain how these extra-curricular activities are organized and administered, to evaluate what is being done and to work out still further a constructive program for developing these worth while extra-curricular activities, as a means of training in citizenship.

Home Rooms. The basis for enabling high school pupils to develop the ability to participate intelligently in directing their own extra-curricular affairs is in the organization of the home room. This ability may be neglected entirely or be ever so poor, and yet certain pupils by force of their native ability will develop into school leaders. The ideal, however, is not to develop a few leaders who may make a great showing for the school, but rather to provide the opportunity for *all* pupils to develop their initiative, their ability to coöperate, to lead, and to be intelligently obedient to authority, just as far as they can. The place to develop these abilities for the junior citizen in school as for the adult citizen in the state, is, first of all, in his own comparatively small community with his own fellows. In a large high school this small community means his own home room, or recitation group, then his class—freshman, sophomore, junior, senior—and finally the organization of the whole school.

The home room furnishes the opportunity for small beginnings with some of the results immediately apparent. For home room activities there are in the Philadelphia schools such possibilities as membership in the Students' Association (every room usually strives for 100 per cent membership) and athletic association, or subscription to the school magazine. In addition there are the routine affairs of the school. These may be undertaken as just so much drudgery for both teacher and pupils, or they may be welcomed as furnishing an opportunity for the pupils, with wise assistance from the teacher, to show how well they can manage their own affairs, to what extent they can assume responsibility and make good. In some of the more pro-

gressive schools each home room elects its own officers for handling its routine and more unusual affairs. If the teacher discovers to the pupils just how well they can run their home room affairs, even some of the worst offenders often develop a real kind of enjoyment and pride in showing how well they can handle such problems as regular attendance, tardiness, reports, memberships in school organizations, library books, passing in the halls, contributions to school publications, membership on school teams, or inter-home-room contests. Home rooms in many high schools in the United States now pride themselves on their ability to greet a visitor courteously, to manage themselves in an enforced absence of the teacher, to get every pupil in the home room to do his work just as well as he can. In such rooms pupils on the basis not only of personal liking but also of the good of the home room, help each other over difficulties, and especially in times of individual misfortune, share in the sympathetic effort of the home room family to help each individual to live up to his or her best self.

Pupils coming from the sixth grade to a junior high school or from the eighth grade to a big senior high school, are more or less lost if the teacher does not see to it that the home room lives up to its possibilities. This room is the school home of the pupil. If under the direction of the teacher the situation is properly organized, practically every pupil in this home room can and will contribute to its welfare and honor and to that of the whole school.

While there are many exceptions in the Philadelphia high schools, the possibilities of the home room are largely neglected. In some high schools it does not exist at all as a socially educative agency. No provision for it is made in the school program. In some high schools owing to the fact that the auditorium is not large enough to permit all the pupils to attend assembly at the same time, classes alternate in remaining in their own rooms during assembly. The situation so far as the assembly is concerned is unfortunate. However, there is this advantage: the groups that do not attend assembly have time to attend to their own affairs. In the vast majority of home rooms little use is made of this opportunity.

Responsibility for the failure of the home room here does not lie with the pupils nor primarily with the individual teacher, but with the principal of the school. All of the eleven high school principals believe to a greater or less extent in the participation of pupils in at least the directing of the extra-curricular activities of the school, yet they do not all seem to have worked out a plan of home rooms wherein all the pupils are stimulated or have an opportunity to share in managing any large part of their own more intimate school responsibilities. Again, where on account of the size of the auditorium there are during assembly

certain pupils in their home rooms, the principals in nearly all cases do not seem to have had a plan for the simple organization of these home rooms so that the pupils feel that it is theirs and that with the aid of the teacher it is their business to make it just as profitable as they possibly can. There can be on the part of the principals a keener vision in organizing these small groups, so that they have an opportunity to develop the qualities that fit them for a democratic form of government in or out of the school.

The pupil leaders are often selected by the teachers; and while the pupils are robbed of the educative value of making a wise choice. it must be understood that these pupil leaders selected by the teachers often do excellent work. A sketch of one such plan may aid in making this point clear. In one school (Philadelphia High School for Girls) eight pupil *sponsors* from the senior class are elected every year by the faculty. It is the duty of these eight sponsors to have an oversight of the welfare and conduct of the whole school and to have charge of each of the individual classes. One of these pupil sponsors explained her work thus

"(1) To help and advise the class over which I have charge.
"(2) To advise them in difficult positions.
"(3) To arouse a school spirit among the girls.
"(4) To stimulate an interest in school activities.
"(5) To teach girls to respect the school code.
"(6) To create a spirit of friendship among the girls.
"(7) To hold meetings at regular intervals to discuss the welfare of the class and of the school.
"(8) Finally to be a 'big sister' to the girls of my class and to make them feel that they can come to me when in trouble and expect sympathy and advice."

These sponsors hold regular meetings of their classes to work out class problems, but especially "to help the younger pupils to a better understanding and a higher appreciation of their privileges and responsibilities in the school community; and to pass on the traditions and modes of conduct approved by the school."

These sponsors "are supported by aids and assistant aids, one elected from every section to serve for a term of ten weeks. The aids, in addition to dealing with general problems, may be called upon to solve the special problems that arise among their respective groups. Besides these coöperative functions, the aids and their assistants perform various administrative duties; for example, the aid conducts the class in the absence of the teacher, represents the section at meetings, reports prolonged absences to a central school service committee, and acts generally as the executive officer of her section." One of these

aids chosen from the second half year of the entering class says: "There are many opportunities for a girl to prove her true colors when serving as an aid. Her responsibility is threefold—to herself, her section, and her school. It is her privilege and her duty to see that the girls are fair to themselves and to their associates. She must not give way to the whims of the girls just to be popular. Above all, she must not be partial to her intimate friends or over critical of others. Since pupil government is a comparatively new organization, it depends upon us aids to prove it is the only thing."

In such a system for organizing the eight classes and the fifty or more sections in this school, some sixty girls as sponsors or aids are receiving an exceedingly valuable training in leadership. However, the center of the responsibility is in the sponsors and aids and not really where it belongs, in the class itself; and the sponsors are chosen by the faculty.

A critical evaluation of the school organizations of a high school cannot be made entirely on what exists at the moment. Such an evaluation must be made in part on what has been and in what direction the organization is headed. The organization that has been described in the preceding paragraph was probably as progressive as the school could stand. It commanded the loyalty of the pupil leaders, seven-eighths of whom were elected by the pupils.

Many teachers who succeed more or less in a paternal or maternal form of school government, or who have the stamina to struggle through confusion in a go-as-you-please absence of system, do not have the ability to succeed in a socialized home room. They must modify their method of work to enter successfully into a situation where a premium is placed on pupils' initiative, coöperation and leadership. Such teachers must change their ways, for they belong to a vanishing race.

Success in developing pupil participation and coöperation in the government of the whole school depends first of all on success in developing the ability among pupils to direct themselves, when aided by the teacher, in the affairs of the home room. The great majority of Philadelphia high schools are intensely interested in pupil participation through "Student Associations," but the teachers and principals are, in the main, neglecting the first big step—the organization of the home room to manage with the advice of the teacher its home room affairs. To develop such an organization there must be a home room period of at least fifteen minutes every day. The principals, or their designated assistants, will have to furnish the leadership to enable the teachers to see that this period is used intelligently. Some teachers and some principals will have to change their attitude and method of work if they wish to be of use in such a system. On the other hand the great

majority of the principals and teachers that were observed are able to develop the home room program now, if they believe the basis for the training of pupils as citizens of the school and of the community lies in the home room.

Recommended:

1. That the principal of each school, with the aid of his teachers, and with the aid of the supervisor of all the high schools, work out a general plan of home room organization for his school.
2. That every home room organize itself to direct its own immediate affairs and to coöperate with every other home room.
3. That a fifteen-minute home room period be a part of the daily schedule.
4. That the teacher guide the pupils rather than dictate to them the way of meeting their responsibilities in the home room.
5. That pupils, guided by the teacher when necessary, elect their own leaders or representatives.
6. That the representatives when elected actually work with and represent their groups rather than form with other representatives a detached body dispensing laws for their groups.

Class Organizations. According to the present plan of the Philadelphia high schools the classes in the upper half of the school are usually organized. Class organization is an advantage in that it enables the class to gain the experience that comes to an organized group when it assumes the responsibility of handling its own business. Such organization is of further advantage in that it enables the class to coöperate for its own good and to coöperate with other classes for the good of the school.

The majority of the teachers of the Philadelphia schools who are interested in pupil organizations do not seem to favor organization of the four classes in the lower half of the school. They point out that these four classes in the lower half of the school are not able to govern themselves, that the members of the classes do not know each other, and that there is plenty of time to organize them when they become seniors. This opinion is not limited to teachers. Graduate students in a univeristy often feel that the work of the undergraduates is after all very light. Sophomores in college consider the freshman as rather raw. Freshmen tend to consider high school pupils as trivial. High school seniors sometimes think the high school freshmen are impossible, while high school freshmen have been known to think of junior high school pupils as mere babies. The fact remains that many of the best examples of student councils in American schools are now in the junior high schools, and the reason that these councils are doing such good

work is, in part, that the pupils have an opportunity through practice to learn how to direct their own immediate affairs.

It is true that these four lower classes in the high schools cannot govern themselves. Neither can any high school class govern itself alone as well as it can with the advice of some wise teacher, nor can it learn how without practice. Such a thing as actual student self-government does not exist. That these four lower classes broken up into many sections do not know each other is probably true. As the organization of many of the schools now exists, there is comparatively little reason why pupils should know each other. Wherever it exists, this lack or knowing the other fellow is a weakness in any form of democratic government. If the home rooms are organized and each home room sends representatives to sit with representatives from every other home room in a Class Congress or a Class House of Representatives, the way for the members of each home room to know the members of every other home room in the class is begun.

The discussion of plans for the class and for the contribution of the class toward the welfare of the whole school should go on in every home room. These home room representatives when assembled in a Class Congress should actually represent their home rooms rather than consider themselves overlords and pass laws for the good of their subjects. If the claims of pupil participation in government are just, and if such participation does develop the initiative, ability to lead or pick a leader, the pupils' ability to coöperate and be intelligently obedient to authority, then the entering classes need this organization as much as any other class in the school, if not more. If class organization and "Student Associations" are just another way of getting things done, let us do away with all of them, and appoint a benevolent despot to rule. If, however, there is any value in the doctrine of learning by doing, there is a chance to realize something of this value in organizing the lower classes in the Philadelphia high schools. The argument that there is plenty of time to organize the classes when they become juniors or seniors is partly sound if one is interested in just graduating classes, but if one is interested in the individuals of each class, it is necessary to recognize that many of the pupils drop out before they come to the upper classes. These pupils who drop out probably need the sobering restraint of responsibility willingly assumed more than many of those who remain in school.

The time and energy of the pupils and of the home room and of the class advisers are justified according to what the classes attempt to accomplish and the way they accomplish worth while ends. If in managing their own affairs the members of a class learn how to lead, or to follow a wise leader, how to manage themselves and coöperate

with others, the result is worth all the effort it takes. There is, it seems, in the upper classes a strong tendency for a few leaders picked by the faculty or elected by the class to do all the work and the worrying, while the others go on their way without responsibility. Legislation seems to come from the top downward, and the worst of it is that too many of the pupils, like many of the citizens outside of school, seem perfectly satisfied with such a scheme until it interferes with their own way of doing things. The actual forming of public opinion in the home rooms, then in class organizations, and finally in the student association, should do much to secure intelligent participation of all pupils in solving their own and the schools' extra-curricular problems.

Recommended:

1. That with the aid of a teacher adviser each of the eight classes in the high school organize itself.
2. That two representatives from each home room be elected to form the class congress.
3. That home room representatives actually represent the home room rather than act as overlords to pass laws for their subjects.

Student Councils. The powers of the Council, or Students' Association, should be derived from all the citizens of the school. Those pupils who voluntarily join this association and pay a nominal tax of perhaps ten cents a term, should constitute the citizens of the school. The work of this association is so important and ought to be recognized as being so worth while that every pupil will become a citizen. This organization subject to the direction and to the veto of the school principal or his representative or representatives, should be all-powerful in regulating extra-curricular activities. All pupil organizations should be chartered by this central organization and all rules for regulating affairs of any organization should be passed on by this central body. The office of the president of the Students' Association should be the most honored position in the school any pupil can obtain. The successful organized participation of pupils in school government demands that the elected representatives should not constitute themselves as an oligarchy and assume all power but that the home rooms and the various classes should be organized so that opinion passes from the citizen to the council quite as freely as the directions of the council pass to the citizens.

The work of the Student Association must be subject to the direction of the principal of the school. The principal is responsible to the superintendent of schools for every activity of the whole school; the superintendent, to the school board; and the board to the people or the representatives of the people who created the board. There can

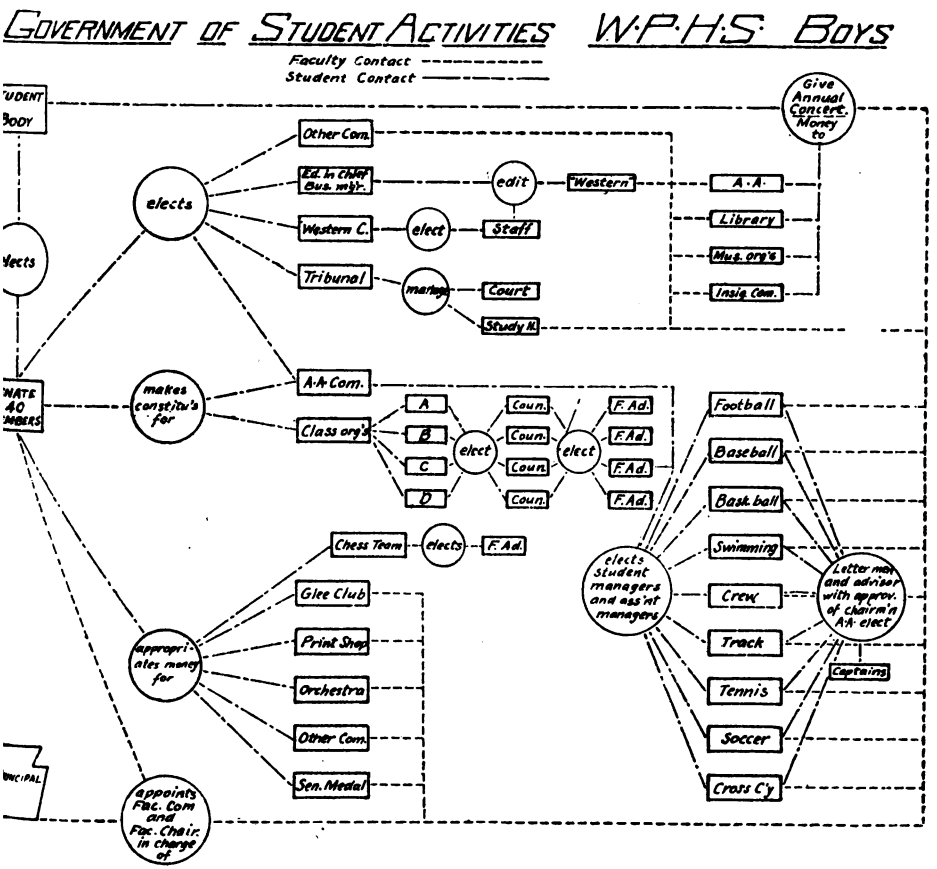
be in no absolute sense student self-government. The pupils are not responsible to the people, who make the school possible, for the way the school is conducted. It should be kept in mind that the principal is responsible for the whole school. But there can be, and should be, pupil participation in government under wise direction.

In the Philadelphia high schools there is no one form of student association in all the schools. The most common form is a central body composed of a representative from each section with additional representatives from the upper classes. This central body is frequently called a House of Representatives or a Senate. Over this group there is usually a smaller body composed of representatives of the upper classes and a certain number of teachers. This smaller group constitutes the Executive Board. There are several variations on this general plan. While the central idea of this plan seems to have been taken from one of the older boys' high schools, every school recognizes that no ready-made plan handed down from some school will work successfully in any other school. Every school seems to know that the pupils with the help of some teacher, or group of teachers, must work out a plan to suit the particular ideas and needs of the school that is adopting a new plan. The willingness to modify, to create such new plans as exist in the William Penn High School for Girls or in the South Philadelphia High School for Girls, indicates the real vigor of this idea of pupil participation in government in Philadelphia high schools. Since the first "Senate" was organized in the Northeast High School for Boys in 1897 and was later developed in the South High School for Boys in 1907 and in the West High School for Boys in 1910 and 1912, these changes in form and method have continued until the Student Associations in some of the girls' high schools are attaining a much more complete training in citizenship than was possible in the earlier "Senates."

There are many variations in the different plans of Student Associations. The following chart will aid one in understanding the plan in the West Philadelphia High School for Boys.

In this school the chief legislative body is the Senate. The student body is composed of forty groups, each one under a faculty adviser. The purpose of these groups is technically to take attendance and aid in making pupil programs and reports, but these same divisions are used for electing one senator for each group. The adviser is chairman of elections. The permanent chairman and the treasurer of the "Senate" are faculty members, but the vice-president, who is a pupil, usually presides. Citizens are those who have paid a poll tax of ten cents per term and these citizens elect one of their number as a senator and another senator as an alternate senator. The senators are usually

elected from members of the upper classes. This is possible because in this school members of the various eight classes may belong to the same sections. A senator may lose his office or become ineligible through an unsatisfactory record. The powers of the senate cover almost the whole range of pupil activity. The senate elects the editor-in-chief and business manager of the school magazine, the *Tribunal*, and the various committees.



The Germantown High School follows the same general plan, but has an Executive Council, composed of the officers of the senate and of faculty representatives. This Executive Council is charged with initiating most of the activities necessary to enable the pupils to participate in the supervision of extra-curricular activities.

The South Philadelphia High School for Girls follows essentially the same plan as Germantown, except that it has a larger Executive Council and that the House of Representatives may originate for the

Student Association plans which become operative when approved by the Executive Council.

In the West Philadelphia High School for Girls the legislative and executive power of the Student Association is vested in an Executive Board of thirteen pupils chosen from upper classes together with an Advising Council composed of a committee of teachers appointed by the principal.

The William Penn High School for Girls was a pioneer in developing a democratic, vital Students' Association with a spirit that breathed a new life into the whole scheme of pupil participation in the affair of the schools. In this high school where the interest in pupil participation has been so keen, the senate is composed of the president and vice-president of the Students' Association and eleven other senators, two from each of the three highest grades and one each from the five lower. The Senate has the power to supervise all organizations formed by members of the Student Association, to take charge of the financial affairs of the Students' Association, to grant charters to clubs, to make new laws when necessary, and generally to take such action as it believes will be for the good of the Students' Association and the whole school. Meetings are held once a week and are conducted by the president of the Association. The Sponsor, a teacher who represents the principal, is present at these meetings to offer suggestions or advice if needed, but she encourages the expression of individual opinion and in no way hampers free discussion. Plans requiring the principal's approval are submitted to him by the president or by a committee of senators.

The election to the House of Representatives of one girl from each of the sixty groups in the school enables the whole school to have direct representation. The unusual success in this school in getting all the pupils interested and coöperating in the Student Association and in affairs of their home rooms is largely due to these representatives. The larger decisions are made in the senate, but it is the section and intimate group discussion of ways of bettering the life of the school that make for an unusual degree of democracy in this student association. At the monthly meetings of the House of Representatives the ideas, plans, and schemes for better ways of pupil coöperation in government that have been previously discussed in the home rooms are brought up for discussion before all the sixty representatives. The pupils in this school do not once for all delegate their power, rights, and interests to certain office holders in the Senate or the House of Representatives and then give up active interest and passively submit to the laws made by the officers they have elected. There is a kind of intense, personal interest among these pupils that is hard to capture in words, but which in an unusual degree makes each pupil feel that she is a "committee of

one" to manage herself and coöperate with others for the good of the school.

This plan of pupil participation is further carried out in the system of Monitors. The monitorial force is composed of approximately one hundred and fifty girls appointed by the sponsor of the Students' Association from the upper classes. Each period of the day the study hall is supervised by a monitor captain and her assistants. These monitors assign seats in the study hall, make out the chart of the seating, verify and post it in the study hall. The monitors check attendance and if a girl is absent, ascertain where she is. The monitors do not seem to spend much time talking about order; rather they are very busy living it. In the study hall on the two days it was visited there seemed to be no feeling of repression on the part of the pupils; there were life, vitality, vim, but no confusion. There really seemed to be a contagious spirit of happiness of work.

The scheme of pupil participation carries itself still further. Not only the president and vice-president of the Student Association, elected by the whole school, or the eleven senators elected by the classes, or the sixty representatives elected by each home room, or the hundred fifty monitors appointed by the Sponsor, work in definite ways for the welfare of the student body; but there is still another group, the Volunteers. This group, made up of volunteers from the Low X class in charge of its senator, is divided into teams with captains. Each team has a specific duty at lunch time in organizing and directing the activities of the pupils in the lunch room. These volunteers are the younger girls. Their work is not exactly joyful, but they do it because it is for the good of the school, and they do it also because service to the group and to the school is the fashion.

It is an honor to hold office in the William Penn High School for Girls, and although there are some three hundred officers, there is honor enough for all. As soon as possible after the election of officers a morning assembly is given over to the ceremony of their installation. The whole school assembles to see the long procession of officers enter with fluttering banners. The insignia on the school banner, the school seal, and the school motto are explained. The president of the senior class gives a statement of the aims of the Student Association. Pledges of office are administered by the principal, repeated by the president and chief judge, agreed to by the senate and court, and, finally, by all the other officers. The principal makes an address and in conclusion calls on the whole school for a pledge of loyalty to their own Student Association. After the pledge is given all sing the school song. For these girls there is a thrill in this installation that tends to make them want to do everything they can for the Association and its work for the

girls and for the school. When the president and the senate take their pledge, which is an adaptation of the Ephebic Oath, and when the Chief Judge and her associates make their solemn promise after a modified Pennsylvania State form, there is an emotional as well as an intellectual recognition of the serious obligation and opportunity inherent in this Student Association. For these girls, insistent needs in their work for themselves and for the school give opportunity for the emotional impetus to translate itself into habit-forming activities.

Another feature of many of the plans of Student Associations is "The Court," or Tribunal. At William Penn the Court consists of a judge elected from the eighth or seventh term class and six assistants, three from the eighth and three from the seventh term classes. The trials are often informal. The court admonishes and, when the girl has failed, endeavors to make her see where she has failed. In more serious cases there is a trial. The one making a charge against a pupil must present it to the Judge in writing before the weekly session of the court and must be present in court. The Representative of the Assembly Group of which the offender is a member must also be present at the meeting of the court to testify as to the character of the offender. While no decision of the Court becomes operative until it has received the approval of the principal, the seriousness and justice of the Court are such that when a verdict is pronounced and the offender is asked if she thinks the verdict is just, she actually agrees that it is.

In such schools as the West Philadelphia High School for Boys the five members of the Tribunal are elected by the senate. In the West Philadelphia High School for Girls the principal appoints five girls from the Low XII class who, together with the president of the Students' Association, constitute the Court.

The value of the Court may be very great, for the effectiveness of the Court's decision depends largely on having its members representative of the pupils, and on the ability of the Teacher Sponsor to keep the court fairly informal, to have it work constructively rather than in a punitive fashion, and to see that the quality of mercy is not lost in the judicial proceedings. When the members of a court, chosen as they are for their ability, are fair and just, and when they can have the advice of a sufficiently wise teacher, they can handle many cases in a much better way than the faculty can, for they know each other and can understand from the pupil's point of view the whole situation. The pupil judges can actually, intimately, and immediately enforce their decision.

The plans of Student Associations have been presented in some detail to show something of the ideas involved in these associations in Philadelphia high schools. These plans or the absence of plans of pupil

participation in government enable one to divide, roughly, the Philadelphia high schools into four groups. There is the type of school that has little of the form and less of the spirit of pupil coöperation. There is the type that has informal pupil organization in which, due to the paternal or maternal interest of the principal, the spirit may be fine and in which a few pupils may derive great benefit from their participation in directing pupil affairs. There is a third group where each section elects a representative or senator, and having made this election the constituency ceases to function. The group elected take unto themselves practically all powers and with the advice of a Sponsor direct extra-curricular activities. Finally there is the Student Association, of which the William Penn High School for Girls is a type, where practically all the members of the whole group are participating in some degree in the affairs of the Student Association.

Looked at from a different point of view, there are two kinds of students' associations in the Philadelphia high schools: in one the pupils as a whole are active in the government of the school; in the other the officers try to get the pupils to do what the principal wishes them to do.

In each of the high schools there is commendable interest on the part of the pupils and especially on the part of pupils who are leaders in the student associations. Representatives of the student associations in all of the high schools hold a joint meeting at least twice a year to discuss "Student Self-Government," as they usually call it in the different schools. Here is a great opportunity for the high school teachers, for the principals, and for the supervisor of all the high schools to coöperate with these school representatives. Instead of a great deal of general talk, such a group could consider ways of improving the school magazines, of studying the honor system worked out by the National Association of High School Principals, and such topics as would increase their knowledge and lead to more intelligent extra-curricular activity in all schools. What these pupils need is to have their interest in extra-curricular activities so directed that they will get a clearer vision of how to have better activities for a greater number of pupils without waste of time and effort. At the same time they need the sane guidance of some one person who knows the extra-curricular activities not only in all the Philadelphia schools but also in the progressive schools of the whole country. The right person in such a position would have such an influence among pupils and teachers that great progress could be made.

Recommended:

1. That an Association or Senate composed of pupils representing every home room of the school and of a teacher or teachers appointed

by the principal, should direct the extra-curricular activities of the school.

2. That the principals and all teachers recognize and use for training in citizenship the educative opportunities offered by pupil participation in government.

3. That the activity of the Association be a vital part of the home room and of the class organization rather than that all power be conferred on a few representatives and the constituency cease to function.

4. That the principals, or their assistants, aid in guiding the semi-annual meetings of the representatives of the Student Associations of all the schools, so that there shall be definite discussion of important phases of extra-curricular activities.

5. That all principals and advisers of pupil activities study the organization and method of work of the Students' Association of the William Penn High School for Girls.

6. That the principal stimulate and guide pupil organization and that he exercise the veto power when necessary.

Teacher-adviser for Extra-curricular Activities. The success of such organizations of home rooms, classes, and student associations as have been pointed out in this report as either present or desirable in the Philadelphia high schools depends for a large degree of their success on the wise planning of the home room teacher, of the class adviser, and of the adviser or sponsor of the association. The work of the sponsor for the Students' Association is so heavy, so many-sided, and so far reaching in its influence, that where it is well done it takes practically the whole time of one teacher. In some of the Philadelphia schools one teacher has been assigned to this work. This position is second in importance only to that of the supervisor of instruction in the high school. A high school principal should not be forced to reduce his teaching force to provide a sponsor for the Student Association. This position should be officially recognized and provided for in assigning the number of teachers to a high school.

In each of the boys' high schools there should be a male assistant to the principal whose first duty is the advising of the Students' Association and its subsidiary organizations.* In a girls' high school, regardless of whether the principal is a man or woman, there should be a woman assistant to the principal who is the adviser of girls and of the teachers in all extra-curricular activities. The women principals probably could do the work of an adviser themselves. If they do it, however, and do it well, they will have little time left to direct the other affairs of the school. In the William Penn High School for Girls, while

* See Addenda.

there is a woman assistant principal, there is also in reality a sponsor who devotes practically all of her time to the Students' Association. Such a position should be recognized and paid for according to its importance.

Recommended:

That there shall be appointed in each high school an assistant to the principal whose first duty is to have charge of the extra-curricular activities of the school.

School Teams. The problem of physical education is to establish right habits of living. Right living must result in such a high level of vitality as to enable the individual to keep well, to be mentally and physically efficient in performing his school work, to have the power, speed, endurance, and the nerve control to work consistently on a high level of accuracy and efficiency, to have the vitality to see problems clearly, to see them whole, and to have the stamina to make moral decisions, to be free from nervous irritability, and to have a reserve of nerve power when facing complex problems and in moments of sudden emergencies. This high level of vitality must exist if the high school pupil, or the adult in later life, is to do efficient work in society.

For the accomplishment of efficient work the physical educator must develop in the pupil the power to direct himself. The physician, the physical educator, and the coach must determine the physical condition and the health habits of each pupil. These directors must determine where the pupil is deficient, where health habits are wrong, and help the pupil to do the thinking and form the habits that will overcome these defects. Where the case demands it, these directors must also stimulate and supervise the self-direction of the pupil so that he has the vitality and control to get rid of a negative and assume a positive attitude toward all his physical and social relationships.

Since right living must be carried on twenty-four hours of the day, and since the pupil spends but a fraction of the day in school, it follows that the greater part of this right living must be done outside of school. Progressive present day physical educators have given up almost entirely the German and Swedish exercises with their inhibitory and joyless commands and have in many school systems established the natural play spirit in physical education. However, on account of the time and conditions of school work, as now understood by many teachers, this play spirit must develop itself largely outside of school hours and of the regularly accredited curricular activities. These extra-curricular activities include such physical activities as are carried on by the Boy Scouts or Girl Scouts or Camp Fire Girls as well as all the intra- and inter-school sports.

There are other educational features of the extra-curricular physical activities that must not be neglected. The wise supervision of the playing field provides rich opportunities for the player's initiative, leadership, and coöperation. The player who can think up a new game or devise an improvement in an old one, or who can organize and direct a new group for playing, has his initiative and leadership and coöperation rewarded by the approval of his fellows. Here players selecting their own leaders and following them, must coöperate in any contest or meet with sure defeat. The accepted rules of the game make for intelligent obedience to authority and demand clean sportsmanship. Individual players as well as leaders must accept responsibility and must make good.

The qualities of initiative, leadership, coöperation clean sportsmanship, intelligent obedience to the rules of the game and the acceptance of responsibility are needed by all boys; and if athletics helps develop these qualities, it naturally follows that not only the ablest pupils who play on the "first teams" should have the opportunity to develop these qualities but that every pupil in school unless he is physically defective should play regularly on some organized team.

The section of the Student Council that has charge of athletics, or (in a school less well organized) the athletic association, gives the pupils an opportunity to work out under supervision the organization of their extra-curricular physical activities. There will never be and there should not be enough adult supervisors to work out all of these activities. Pupils like to find and work out some things for themselves. The wise supervisor give stimulus and direction to the work and focuses public approval on those who contribute to the welfare of the group.

The control of athletics so far as athletic contests are concerned seems well cared for by the Supervisory Committee on Athletics. The athletic associations, sometimes with a paid-up membership of 97 per cent of all the pupils in school, should be under the general supervision of the Students' Association. Otherwise the school dissipates its energies with two general organizations having the same membership.

Some of the high schools—Central, for example—have no adequate gymnasium, and such a playing field as there is at Northeast or the Frankford High School is the exception rather than the rule. Philadelphia must provide more playing fields and for many schools better gymnasiums if there is to be any real opportunity for every pupil to participate in games and organized play, either in or out of a gymnasium.

Where there is an absence of proper facilities for physical play, the work of the athletic association becomes of even greater importance than in a well equipped school. A good gymnasium or field may lead both teachers and pupil leaders to arrange a program that will include

contests between teams from every school section of every class. However, even where no adequate facilities exist, the whole school under the leadership of the teachers of physical education, must find some means for all young people to play. The athletic association must provide attractive programs. In many Philadelphia schools by using the gymnasium steadily through the late afternoon, by games in vacant lots or in miniature schools yards, by trips to distant fields, the athletic associations are developing the play spirit and enabling many pupils to get into organized games. Where there is a leader of sufficient ingenuity, seemingly impossible difficulties are at least partly overcome. There should be more such leaders who refuse to be overcome by their difficulties, and at the same time the School Board must recognize that for high school boys and girls, gymnasiums and playing fields are more important than astronomical observatories.

Recommended:

1. That provision be made in gymnasiums and on playing fields for every pupil to participate actively in physical play.
2. That leadership be provided which will develop not only school teams but will arrange and carry out attractive play programs for all high school pupils.
3. That in organizing and carrying out the play program, provision be made for developing the pupil's initiative, leadership, coöperation, and intelligent obedience to authority.

School Dances. For the great majority of boys and girls there comes a time when they must dance. It is an instinctive tendency to express a love of rhythm and of motion. Boys and girls are going to be together and they are going to dance. If the schools do not use this instinctive tendency for developing the right standards of dancing, certainly school authorities and supporters of public schools cannot criticize unfavorably the dancing of young people whom they could instruct but do not. Philadelphia Public High Schools should provide this opportunity for boys and girls to meet together socially when parents approve and to dance under normal conditions. It is better for the individual pupils, for the school, and for society that boys and girls meet under these normal circumstances. For many pupils the school can furnish the best opportunity for boys and girls to meet socially and naturally.

Recommended:

That the school establish standards, and where parents approve, provide opportunity at school for social dancing.

The Assembly. The assembly is the meeting place of the whole school. It offers a unique opportunity to build up school spirit and focus public approval on worth while school activities. Through wise planning on the part of an assembly committee, the whole school may get a vision of the educational possibilities of the school assembly. Participation of the pupils and faculty in assembly programs and the presentation, directly or indirectly, of the schools' best activities in assembly help to develop a community spirit. It is necessary to recognize that school leaders can take certain definite steps in forming public opinion and not to leave this all important factor to mere chance. The school that forms and shows its spirit only when meeting a rival team in competition really has no true spirit.

Community spirit in school is desirable. Temporary enthusiasm may be aroused by an outside speaker, but real community spirit grows most surely by the activity of the citizens of the community. The citizens as citizens should take part in forming the spirit of the community. Opportunity should be given the assembly of the school citizens to aid in forming this opinion under the most favorable circumstances. The citizens must assume responsibility, plan, act, in order to develop the right spirit and habits for participating in the constructive life of the school.

The assembly programs should be carefully planned so that through direct or vicarious participation the pupils and teachers will form right habits and right mental attitudes as citizens of the school. Problems that affect the whole school should be discussed. The Students' Senate or Association, and the various clubs may assume the responsibility for certain programs. School contests in debating or public speaking presented as an assembly program may aid the speakers and guide the whole group in a right direction. The work carried on in the various classes, English, History, Civics, Art, and the Sciences, may have such general importance as to win deservedly the interest and attention of the whole school in assembly and at the same time explore phases of these subjects to the pupils. Right mental habits may be formed by the observance of special days such as Arbor Day, Christmas, and the birthdays of national heroes. The school awards honors for achievement in the activities it wishes to promote and the place to do this with ceremony and distinction is in assembly. The principal, teachers in the school, former pupils, or distinguished speakers from the outside can by speaking in assembly promote that kind of school spirit that will express itself in worth while activity. The assembly singing, intelligently directed, can furnish real enjoyment, elevate taste, and aid in establishing that mental and emotional attitude necessary for the individual's receiving suggestions for the good of himself and of

the whole group. Careful planning on the part of those who know how makes possible joyous, constructive, stimulating, satisfying assembly programs. The assembly is one means the school uses for the direct education of its citizens.

Many high school problems demand the united effort of the whole group for their solution. What is the attitude of the whole school, pupils as well as teachers, on the matter of scholarship? What responsibilities shall the pupils with their advisers assume in the direction of extra-curricular activities? What has the school done in the past to merit the estimation in which it is now held by the community? What are the resources of the school at the present time to aid it in improving on its own previous record? What is the school's spirit of sportsmanship for its own teams, for its rooters, and for the reception of visiting teams? What is the relation of individual pupils and of the whole school to the community? What is the school's attitude toward care of the building, toward punctuality and regular attendance? How shall the school receive its visitors to the building or to individual classes? How shall the pupils care for their individual property? What is the school's attitude toward clubs and athletic teams—shall there be clubs and teams for everyone or shall there be just one debating team and one football team? These are of course only a few of the more general problems that the whole school must solve.

The principal can solve all these problems himself and announce the solution to the school. Even if he could solve all the problems correctly and do the impossible by putting his solution into immediate effect, he would have robbed the pupils of the educative opportunity afforded by these insistent problems that must be solved. The pupils by discussing these problems in the home room, in class organizations, in student association, and in assembly, are educating themselves. Such a democratic process is slower than an order from the principal's office, but a principal who works through this process will get more lasting and more satisfying results.

The installation of the officers of the Senate or the Students' Association may have a definite influence in unifying the life of the school and promoting right school spirit. This is the plan, as has been pointed out, at the William Penn High School for Girls. As soon as possible after the election of officers, a morning assembly is given over to the ceremony of their installation. Appropriate exercises are planned, occupying about an hour. After the school is seated, there occurs the march of the officers. The Senate and the Court occupy the front of the stage, the other officers take the seats reserved for them in front of the platform. It is impressive to see the 300 officers in procession, following the American flags, come down the long aisles

with the dignity that the occasion warrants. The music of the march and the hymns sung are carefully chosen. The insignia on the school banner, the school seal, and motto are explained. Then the President of the Senior Class gives a statement of the aims of the Students' Association.

The pledges of office are administered by the Principal, repeated by the President, and the chief Judge, agreed to by the Senate and Court, and, finally, the other officers.

The arm bands are then presented, the Principal, himself, attaching those of the President and the chief Judge.

The Principal makes an address, in conclusion, calling on the entire school for a pledge of loyalty to the Students' Association, which they signify by rising; then they sing the school song. The entire exercises are simple, yet dignified. That they make a great impression on the school at large may be seen from the following comments written by students.

"Only our national flag thrills me as does the installation of officers of our Student Government. When I see Old Glory, the sensation is so great as to make me want to do all I can for America. So is it with our Student Government. When I see the installation of officers take place, I want to do as much for it as is within my power."

On Wednesdays at the South High School for Boys the Senate presents the program. At one of these programs the "Senators" reviewed the achievements of the Senate in organizing a debating club, developing an athletic committee on awards, and the reorganization of the chess and checker club. At the Frankford High School the "Board" composed of seventy-five members conducts pupil assemblies every Thursday. In several of the high schools the pupils have a custom of holding assemblies which teachers are not expected to attend. There may be a real value in keeping the teachers out; but if the attitude between the teachers and pupils is right and if the teachers promote pupil activity instead of doing all the work themselves, it is difficult to see what this value can be. At the Germantown High School, in the absence of a working plan of home rooms, the minutes of the pupils' organization are read in assembly.

The fact that a Student Association conducts an assembly is of little importance, although the speakers may receive benefit, unless the association by its use of the assembly period aids in realizing some definite aim of the school. The Students' Association that has the backing of its constituency can solve effectively may of the problems that face the whole school and for it to use an assembly program in any half-hearted way is a waste of its opportunity.

Many assembly programs might explore new fields of interest for a great majority of the pupils. Each "department" of the school

should in an assembly program carried on mainly by its pupils reveal the possibilities of that "department" for the whole school. Many pupils say they will not elect Art, Music, or Biology when they know very little about the work in these courses. How can they like that which they do not know?

The principal, or members of the faculty, or speakers from the outside may explore to the pupils some phase of the city's life, its industry, art, or music in such a way as to lead them to desire to know more of these important fields. Representatives of various professions, of the trades, of different lines of business, may explore these activities, so that the pupils will think of them more intelligently and with more respect. Former pupils may return from college and so speak that more of the pupils will strive to continue their education after they leave high school. Musicians within and without the school, may explore and present some phase of music so attractively that the pupils will want better music.

There is some definite exploratory work done in the Philadelphia high school assemblies. As examples, the work of the Wharton School of Nursing was presented at the Kensington High School; an alumna of the Philadelphia High School for Girls who is principal of a school in Constantinople returned to tell the girls about her school and the earnestness of Turkish girls in getting an education; a singer explained the themes of her Swedish songs at Frankford; a speaker at Germantown left such an impression about the art of living that the pupils remembered his motto: "Learn something useful, see something beautiful, and do a kind act *every day*." However, there seems to be little attempt made to use the assembly period as a means of exploring either the work of the various phases of the school or the outside world to the pupils. In one school (Germantown) out of eight consecutive assemblies five of them were devoted to outside speakers, yet a study of the themes of these speakers indicates that little attention was paid by any supervising committee to the fields these speakers should explore for the pupils. With the exception of that in the South Philadelphia High School for Girls, such exploratory work as is done in these assemblies seems incidental rather than part of a definite plan.

Another way of exploring new fields of interest for the pupils lies in having the various school clubs give an account of some of their excursions or present some phase of their activities as an assembly program. The Art Club at Frankford could tell a story of a trip to a picture gallery so that nearly every pupil would want to go, or with its posters properly mounted and lighted could make all pupils more intelligent about posters they see every day. An account of a trip to the aquarium, a hike along the Wissahickon, or a pilgrimage to Inde-

pendence Hall, could serve to promote worth while activities. By presenting an assembly program consisting of selections by O. Henry, Bret Harte, or Howard Pyle, a short story club could start a run on the library. The idea of the work of a club or of an excursion being used to stimulate more activity along the same lines has not been used to any great extent in assembly programs.

While clubs as a rule have not furnished many assembly programs, the dramatic clubs are an exception. The Philadelphia High School for Girls has a regulation that plays of sufficient interest and worth presented in the dramatic club programs may be presented in assemblies. This same school has presented original plays at Christmas and in "Good Speech Week," scenes from Shakespeare, Sheridan, and Shaw. In a lighter vein they have presented a sketch of two girls studying together and in real melodramatic fashion *Nell, Queen of the Plains; or, Her Final Sacrifice.* In the South Philadelphia High School for Girls, scenes from *David Copperfield* made their way from the English class to the assembly stage. Kensington has presented in assembly, among other dramatic activities, scenes from French plays studied in class.

Thursday is class assembly day at the William Penn High School for Girls and at this and several of the other high schools dramatic affairs play a large part in class assembly. One high school class presented as an assembly program the tableaux of characters in their favorite novels: Maggie Tulliver and the Gypsies from the *Mill on the Floss*, Wordsworth's *Highland Lass*, Tennyson's *Guinevere and Her Maidens*, Beatrix from *Henry Esmond*, Becky Sharpe from *Vanity Fair*, Miss Pyncheon of the *House of the Seven Gables*, and the *Lorelei*. Another school presented as an assembly program three of the most enlivening scenes from *Tom Sawyer*. One-act plays, sketches, serious or gay, have been presented by many classes in several of the schools. One school even gave instruction in table manners very effectively in silhouette. The dramatic work, even if it is based on that almost universal desire to play a part, shows something of what can be done with many other club activities in assembly programs.

The observance of "Special Days" offers a rich opportunity for pupils and teachers to work out and present unique assembly programs. One school (Frankford) worked out a new kind of program for St. Patrick's Day. Another school sang its Christmas carols in many languages and along with the singing was a report on the charitable work the school had done at Christmas. Washington's and Lincoln's birthdays were celebrated in several of the schools, usually by bringing in a speaker from the outside. Bird Day and Arbor Day were celebrated in much the same way. The importing of a speaker to do all the work

of observing the day is usually a way of neglecting an educative opportunity.

The programs worked out by the pupils and their advisers are educative and of real interest. One school (South Philadelphia High School for Girls) gave an All-American Day assembly. The pupils sang America and the Star-Spangled Banner, and representative pupils, native and foreign-born, spoke about America and the American flag. Four girls who had gone to visit foreign-born families who had taken out their citizenship papers made their reports. It was a pupil's assembly. Another school had on October 7th as an assembly program "A Tribute to Autumn." The tribute was three poems and music selected from Chopin and Godard. The poems read by three pupils were Keats' *Ode to Autumn*, Thoreau's *Autumn Tints*, and Noyes' *The Burning Boughs*. The selections probably could have been better read by some imported reader or the music better played by some concert pianist, but the educative value and the whole spirit of the assembly would have been lessened.

The assembly music, especially the singing, is the most important single assembly activity. Such leadership should be given that the pupils not only sing but are proud of how well they can sing. Well selected standard songs and hymns should be committed to memory and sung so well that the whole school looks forward eagerly not only to the special assembly "sings" but to this part of every assembly program. In the singing every member of the school can participate. The aim of the music is to furnish enjoyment, cultivate musical taste, wake up, unify, and inspire the whole group. The song leader can bring the group into the right mood to appreciate the other parts of the assembly program and to begin or continue their day's work. The orchestra, original compositions, solos by pupils or outside artists, may aid in elevating taste and exploring new beauties in tone or interpretation or entire new fields of music, but the great morale builder is the singing of the whole group. The victrola when used skilfully and intelligently may aid greatly in developing a keener appreciation of music, but it is the singing school that makes for the happy school. Several schools have a special music assembly each week, but in many visits to assembly it was a rare event to hear the pupils sing. Some special event was always crowding out the assembly singing. Singing should be the one event that is a part of every assembly.

Not all Philadelphia high schools believe in the theory of high school assemblies here presented or share in the activities that have been described. Central High School still has on four days of the week two boys deliver declamations. The Northeast High School for Boys has nobody to train its speakers, but still two boys deliver orations

at each assembly. The only excuse found so far to justify this routine is that it gives practice for the speakers. No one has justified this plan on the basis that the speeches are worth hearing. In a single assembly more than five hundred pupil-hours are used that two boys may practice two speeches, when with proper instruction infinitely better results can be attained in a public speaking class. It is difficult to see what can be the excuse for such a purposeless waste of time and opportunity.

The time and the means of developing the assembly program must be carefully planned. The Central High School has assembly every day from 9.00 to 9.25. The three upper classes fill the main assembly and the freshman class has at the same time an assembly of its own. Four assembly periods are held at the William Penn High School for Girls. At the Northeast High School half of the school attends assembly from 12.00 to 12.22 and the other half from 1.08 to 1.30. At the Germantown High School the boys and girls attend assembly at nine o'clock on alternate days. The West Philadelphia High School for Boys has assembly only once a week. The South Philadelphia High School for Girls and Kensington have assembly four times a week, while the Philadelphia High School for Girls still has a daily assembly. While there are schools that have only one, two, or three assemblies a week, the greater number of schools have assembly four or, in the case of the older high schools, five times a week.

In the organization of assembly some member of the faculty or a faculty committee usually directs the making of the program. In those two schools that have a daily grind of declamations or orations this is a routine duty. In the Philadelphia High School for Girls there is a faculty committee on assemblies. "This committee," says the Teacher's Handbook, "determines types of assemblies, general and special, with fixed days, predetermined, if advisable; to suggest programs, regular and occasional; to seek out speakers and other worthy persons for assemblies; to censor student programs and contributions to assemblies; in brief, to aid in putting the assembly on the plane whence may be caught the time to which we march." At the William Penn High School for Girls each class is responsible for an assembly program every eight weeks. These "class shows" as they are popularly called, sometimes in the form of musicales, pantomimes, or brief dramatic sketches often written by members of the class, are managed by a "senator" and are planned and rehearsed without faculty supervision, except that an early rehearsal must be given before a Censor Committee of which a teacher is a member. Although the faculty fixes the dates, there is a wide difference in the responsibility the pupils accept for presenting the program.

Recommended:

1. That the educational importance of the assembly period be recognized by the whole school.
2. That the assembly programs be carefully planned by a committee of faculty and pupils.
3. That problems affecting the whole school be discussed in assembly by faculty and pupils.
4. That assembly programs be devoted to the installation of Senate or Student association officers and to the awarding of all school honors.
5. That assembly programs presented by pupils, faculty, or outside speakers explore for the pupils new fields of interest either within or outside of the curriculum.
6. That emphasis in assembly programs be placed on pupil participation rather than on the direct activity of the principal, faculty, or outside speakers.
7. That classroom work of general importance to the whole school have a place in the assembly programs.
8. That assembly programs for "Special Days" should be presented by pupils rather than by outside speakers.
9. That assembly music, singing especially, receive more attention.
10. That the practice of having pupils give declamations or orations at each assembly be discontinued.
11. That assemblies begin and end on time.

School Publications. The publishing of the news of the school makes for a common basis of knowledge among all its members. By focusing approval on worth while activities in the news columns, the paper encourages these activities and stimulates others like them. It may and should condemn any practices that work against the best interests of the school, but its great power lies in its promotion of constructive activities and the ideas that lie behind them. The news writing and editing of such a paper should be a part of the regular English work. There should be a class in news writing. This class with such help as it may draw from the whole school should edit the paper. The teacher of this class should be the active, stimulating, constructive adviser. Such an adviser does not limit the initiative, leadership, and coöperation of the pupils, but enables them to triumph over their own ignorance so that they can create effectively.

The patrons of the schools and the taxpayers of Philadelphia need to know what is going on in the public high school. The expansion of the high schools of Philadelphia has been so rapid during the last decade that may of these citizens do not know what the high schools

are doing. Possibly some of the older citizens, forgetting that there has been progress in education as well as in industrial and commercial activities, look back at "the good old days" and believe that the schools should be as they used to be. School newspapers that are well written and full of the throbbing life of the school will be read by the patrons of the schools. By careful planning, the school through news and editorials can make known its educational policy to its patrons and at the same time be reasonably sure that what is published is read. Philadelphia high schools need publicity; the school newspaper furnishes one means of securing it. Many high schools, especially in the North Central, in the Middle, and in the far Western States are now using the high school newspaper as one means of educating the public concerning the achievements and needs of the high school. This education can be carried on through the news as well as through the editorial columns. Philadelphia, the home of so many great publishing enterprises, should be able to furnish the leadership that would make the school newspaper a real power for progressive school activity.

The school magazine issued six or eight times a year can never be a great moving force. For the most part its material is dead before it is published. A monthly magazine, however, as has been demonstrated in Philadelphia and other cities, can exert a definite influence if it has a real, vital constructive policy. From reading the magazines of the Philadelphia high schools, from talking with the teacher-advisers and with the pupil editors, one does not find a big, constructive policy that guides any of the magazines. One hears many comments of what the editors and advisers will not do and will not permit. Surrounded by thousands of ingenious high school pupils, an editor or adviser must pursue a negative policy; but it is a positive, constructive policy that attracts and builds a school magazine. Philadelphia's high schools magazines could be more interesting, of more worth and power, if individually or collectively they had a constructive policy and a definite aim.

The typical Philadelphia high school magazine is a well printed magazine of 48 pages and cover. From a third to a fourth of the magazine is devoted to advertising—business cards and conservative statements of commercial firms. The "literature pages," or stories and verse, take a fourth, or in some of the girls' high schools half, of the space. The jokes clipped from other papers take about a fifth, in some cases much more, of valuable space. Athletics, club notes, and school notes take about a tenth each of the total space. Exchanges and editorials take about the same space, one thirty-sixth each. The remaining space may carry alumni news, or a special story of "who's who" among the teachers or pupils, or at infrequent intervals, a pen

sketch or a feature peculiar to a single magazine. The following is a table of contents of one issue of a school magazine:

CONTENTS

TOPIC	PAGE
Editorial	3
Literature	5
Among the Pines	5
Lest We Forget	7
Anita's Whim	10
Romance of Miss Younge	12
The Tangled Web	13
Follies of ——— High School	19
Poet's Corner:	
Romantic Love	19
Memories	20
Springtime	20
The Vision of Spring	21
School Notes	24
Exchanges	35

There is no established standard for school magazines, but the present tendency among wide-awake high schools is to recognize the worth of the editorials and to devote much space to school activities, curricular as well as extra-curricular. Such schools either publish an out and out literary magazine with no news or cut down the "literature" in the one magazine that exists for the whole school. If Philadelphia high schools would carry more live news, more write-ups of what the pupils and faculty are doing for themselves, for the school, and for the community, they would not have to carry so many "jokes" worn threadbare by being clipped and reclipped from ancient publications.

Every high school in Philadelphia could profitably detai two of its teachers—preferably two of its English teachers—to spend at least one summer studying school publications. One teacher should get a job as a cub reporter on a big daily newspaper and the other should take a course in high school journalism.

The publication of the "Record" or "Annual" by the senior class has long been a custom in many schools. There was a time when the senior class and the none-too-willing advertisers were required to pay considerable amounts to make this publication possible. This publication has now become in many of the more progressive and democratic schools a less formidable affair. While some Philadelphia high schools stil permit the senior class to issue a "Record" characterized by its poverty of material, exclusiveness, and unreasonable expense, yet

Philadelphia high schools as a whole have solved this problem. The senior class gives the school some $300 and thus enables one issue of the magazine to serve both as a regular issue and at the same time carry much of the material usually carried in a "Record" or "Annual." This plan serves at least two worthy purposes: It enables the whole school by reading the "Annual" to profit by the achievement of the seniors, and prevents the waste of the seniors' time and money incident to issuing a book costing from six to twelve dollars a copy.

The South Philadelphia High School for Girls with its "Fortnightly" has made a start toward having a weekly high school newspaper. It has editorial, news, literary, art, alumnae, and exchange departments, a "Poet's Corner," and a "Business Board." It can scarcely be called a newspaper, but it is a move in the right direction.

Recommended:

1. That each Philadelphia high school publish a school newspaper.
2. That the present type of school magazine be given up.
3. That if the school after developing its newspaper can support a magazine, it publish one of as high grade literary worth as it can produce.

Clubs. Regardless of the wishes of teachers or parents, clubs or gangs will exist. The gregarious instinct that is so strong in pupils of high school age not only brings them together, but makes them want to belong to some club. They belong to the school and their class, of course, but in Philadelphia these groups are very large. Even the home room has pupils of an infinite variety of interests. Like-minded, adolescent pupils want to belong to a club that is their very own. The same instinct that fills the adult world with clubs and organizations, fraternal and otherwise, is alive with all its freshness and intensity in the mind and heart of youth. The business, then, of teachers and parents is to guide this instinctive tendency so that the pupils will want to belong to clubs more and more worth while. It follows that it is the business of the school through its organization, through faculty advisers, and through favorable public opinion, to make desirable and possible these clubs that are increasingly worth while.

There has been a long social and legal struggle on the part of public schools against secret Greek letter fraternities in high schools. The desire to belong to a fraternity is perfectly natural, especially to a boy. It is this desire to be with a group of congenial spirits, to have a ritual, a ceremony, a series of secret signs and grips, whereby one boy may know another as well in mischief as in deeds of valor. The trouble is that boys of this age, working in secret, have not yet developed the judgment to formulate a worth while program suited to their needs,

but in their pale and ignorant imitation of their elders, waste their time on an empty and sometimes foolish or even vicious program. It is the business of the educator not to attempt to kill off the instinct that produces fraternities, but to modify it so that with satisfying results it develops into worth while group activities. Social groups, like-minded in their interests, directed by a wise older person who guides just enough but not too much is a possible solution of the fraternity problem. This solution has often been demonstrated, and is now being demonstrated, in some Philadelphia high schools. Where there is a club for every pupil and a wise faculty adviser for every club, high school fraternities will disappear.

Philadelphia high schools are social-minded. There are scores of clubs; in one school alone there are thirty-four, and some of these have as many as four sections. The second paragraph of this survey of extra-curricular activities surely gave a partial idea of the variety of these organizations. In many cases the clubs are the result of some teachers' interest in some particular activity or of some happy circumstance, but at the same time there has also been definite planning on the part of some schools for the development of the clubs.

The plans for organizing and developing the clubs vary in the different schools. However, the general plan is to have the group chartered by the Student Association. In the West Philadelphia High School for Girls, a group of ten or more pupils may sign a petition to the Student Association, giving the purpose of their proposed club and the name of their sponsor, and asking that a charter be granted. The same school, in common with many others, has a definite schedule of "After-School Activities."

Membership in a club is usually a privilege to be gained by a satisfactory rank in scholarship, and at the same time, as a general rule, some means is devised to limit the number of clubs which a pupil may join. The following plan, used in the West Philadelphia High School for Girls, shows the wide range of pupil extra-curricular activities and the rules governing membership.

SCHEDULE OF CLUBS AND AFTER-SCHOOL ACTIVITIES

Students' Association Executive Board.
First Thursday of the month.

Students' Association Book Representative.
First Monday after first Thursday.

Athletic Association Executive Board.
Second Tuesday of the month.

Torch Staff.
Every Monday.

English Club.
Every other Friday.

Dramatic Club.
Every Thursday.

Music Club.
Every Tuesday.

Social Service Club.
Second and Fourth Wednesday.

Chamber of Commerce.
First and Third Wednesday.

Owl (Debating) Club.
Every other Thursday.

Arts and Craft Club.
Once a month.

Dancing Club.
Every Monday.

Hiking Club.
Every Saturday.

Interclass Volley Ball.
One in the Spring.

Hockey Club.
Two afternoons a week in the Fall.

Interclass Captain Ball.
Six games per term.

Interclass Baseball.
Fourteen games in the Spring.

Tennis Tournament.
One in the Fall.

Swimming Meet.
One in the Spring.

Interclass Track and Field Meet.
One in the Spring.

TO SPONSORS OF STUDENT ACTIVITIES

Sponsors of student activities are requested to see that the following regulations are observed:

III. No girl shall be elected or appointed to any major activity who does not make an average of 75 per cent in scholarship. She may not continue to hold office if she does not maintain this average.

No girl shall be elected to more than one major activity who does not make an average of 80 per cent in scholarship, when she may hold *two*. She may not continue to hold these offices unless she maintains this average.

No girl who is a member of a major activity may be a member of more than two minor activities. Otherwise, membership in minor activities shall not be restricted.

Membership in sub-minor activities shall not be restricted.

Major Activities:

Executive Board of the Students' Association.
Executive Board of the Athletic Association.
Torch Staff.
Cast of Mirthful Mummers.
4A and 4B Class Officers.
Chairman of Ring Committee.
Record Committee.
President of any Activity.

Minor Activities:

Arts and Crafts Club.
Captain Ball.
Dancing Club.
English Club.
French Club.
Mirthful Mummers.
The Owls.
Social Service Club.
Spanish Club.
Sphinx Club.
String Club.
Music Club.

Sub-Minor:

Hiking Club.
Hockey Club.

When sponsors wish to know the numerical average of girls in their activities, they will please fill out the slip as follows:

Name of Student..... Grade.....

GRADE.	SUBJECT.	HOURS.	TEACHER'S NAME.	MARK.
4A	English	4	E. M. R.	F

Must have average of 75 or 80 per cent.

Name of Sponsor.....

This slip should be handed to Miss..... and she will return it as soon as the average has been determined.

Clubs. Since the girls' high schools, as a whole, have developed pupil participation in school government through the student associations further than have the boys' high schools, it is to be expected that the most progressive organization of the school clubs will be found in these girls' high schools.

In South Philadelphia High School for Girls, certainly half of the pupils have to go home immediately after school to take care of the house or the younger children, or help in the little shop. Facing this situation and believing in the educational possibilities of the school clubs, the principal and faculty of this school have arranged for all groups to meet the sixth—*i. e.*, the last—school period on Thursday. The clubs, as a rule, meet every two weeks. Thus a girl may join two groups. There are several sections of many of the clubs, but each section, as well as each smaller club, has a faculty adviser. The aim is to have enough clubs and sections of the larger clubs to preserve as completely as possible the opportunity for a pupil to choose her activity, and for the group to be small enough to be really a club. The list of the organizations, together with the number of the members of each, will indicate that there is a great variety of clubs and a great difference in the popularity of the different ones. The list of clubs, together with their membership in the South Philadelphia High School for Girls, is as follows:

Athletic	800	Needle Work	268
Civics	60	Reading	48
Commerce	35	Recreation	147
Debating	18	Story Telling	23
Dramatic	187	Sketch	24
Du Bois	33	Social Workers	103
French	38	Spanish	15
Glee	80	Travel	16
Health	128	Walking	204
Hebrew	108	Writers	10
Home Nursing	59	Camera	94
I. C	28	Dancing	324
Inter Nos	93	Mathematics	26
Just So	138	Seeing Philadelphia, Historical	119
Latin	22	Industrial	40
Modern Novel	11	Museums	45
Nature Study	104		

The last six of these clubs meet monthly, while all the others meet semi-monthly.

While there are thirty-four different clubs, there are, if one considers a section as a separate organization, seventy-four clubs. The Writers' Club, with only ten members, has one adviser, but the "Seeing

Philadelphia Historical Club," with its 119 members and four sections, has seven advisers.

An eighth form girl when questioned, gave seven reasons for approving the plan of the clubs here set forth.

1. "Until we had clubs in the sixth period, many girls could not be members because they had to work after school."

2. "Clubs develop the social side of our natures—we really get acquainted."

3. "We form new friendships."

4. "We become broader in our views when working in our clubs. We see the other side of the question."

5. "We believe that by having a broad generous spirit there will come a greater desire to help the community."

6. "If it were not for the clubs, many girls might become extreme individualists."

7. "We obtain recreation from our clubs. Girls need play just as much as they need work."

Clubs, to be real clubs, have, on the part of their members, so much of idealism, enthusiasm, earnestness, and loyalty that they can be neither decreed nor forced. They must be developed. In their development, the pupils' point of view must be the starting point. As educators, teachers must so arrange and guide the situation that the pupils will get from where they are to where they ought to be. In the freer association of the clubs, this idea applies with even more force than in the regular academic subject matter.

Whether pupils recognize it or not, by work in their clubs they soon learn that they must coöperate or there will be no club. There is opportunity for initiative, for leading, or for selecting a leader to follow. There is a rich reward in the approval of one's associates for responsibility assumed and for making good, and there is a real sting in failure. One must coöperate or get out. Pupils do explore fields of interest, and fortunately these fields of explorations may lead to higher fields of interest. The "Just So Club" attended a meeting of the Drama League, and as one of the girls said, "We were so impressed with the personality of the Shakespearean actor who spoke that we went to hear him in the *Merchant of Venice*." The Recreation Club attended the annual exhibition at the Academy of Fine Arts, and the secretary wrote in the club minutes, "We had a most splendid time, for we were our own critics."

The work of the clubs may aid in exploring the individual pupil for himself. A Mathematics Club of boys took a hike, so the club minutes say, "to see geometrical forms of nature." A group of pupils who were going to a performance of Drinkwater's *Abraham Lincoln*

read together with their adviser poems about Lincoln, and decided they liked best Edwin Markham's *Lincoln, A Man of the People.* Their judgment may or may not be right, but they were thinking, evaluating; they read with a purpose.

The clubs' experiences may lead to interpretation of what one knows only in words. It is plain that the Engineering Club after being divided into small groups and taken through the Baldwin Locomotive Works had a clearer idea of what they had studied; and the members of the girls' club after a hike to the Navy Yard were quite sincere when they said in the club minutes, "We have reason to be proud of our Navy." The group that visited Independence Hall thought they had a new impetus to their love of country. In the account of the trip, a pupil wrote, "Here we saw and touched with our hands that sacred relic of American liberty—the bell of '76." One third form girl, after being stung by nettles, on a club excursion to the Wissahickon, said, in the school paper, "This made me think of that little fairy story in which the girl had to make seven shirts for her swan brothers by crushing nettles. I pity her now because I know what pain nettles cause."

The instinctive tendency in high school pupils that results in so many kinds of clubs is perfectly natural. This tendency may be developed so that pupils in their freer associations learn how to work together, and how to use their time intelligently. Interests started in the club or outside of it may be used to worthy educational ends. Through these activities they may be training in the formation of right habits, in standards of taste, training in a right direction of the emotions. There may be hard work and wholesome fun so combined that the pupils, perhaps without knowing it, get a keener insight into the real joy of living. High schools must train for joy in achievement; joy in the solution of problems social or mathematical. There must be zest, power, zeal in this mixture of work and play called life. Clubs for every one in high school is one way of working toward this end.

The position of adviser for a club helps to keep a teacher human or to humanize those teachers who for some reason have lost the magic touch that enables them to know the heart of youth. Every principal and supervisor has an opportunity to know how some teachers, many of them long in service, have through the routine of the classroom or somehow else lost the joy they once had in teaching. They have come to the point where they teach subject matter instead of teaching pupils. Again there is the specialist, young or old, who is interested in the scientific classification of knowledge and in the imposing of this classification on pupils rather than in leading pupils through experience, to organize knowledge for themselves, and at the same time, to know and appreciate what others have done. If these teachers can, through

force of public opinion or for any worthy appealing reason, be induced to act as the adviser of pupils' clubs, they may catch the point of view of youth, and thus become more effective teachers.

In some Philadelphia high schools, and especially in the older high schools for boys, there is no whole school-planning for the utilization of the pupils' instinctive tendency to form voluntary groups. The principals either have not recognized and studied the question, or they have done nothing about it. Clubs spring up, listen to lectures, and die, or by happy chance, secure a wise adviser who guides and stimulates the pupils so that they carry on activities worth while for youth. There is no whole school-planning to get all teachers and pupils into worth while constructive activities; rather there is a repressive, inhibitory attitude. At one assembly, for example, teachers as policemen, are stationed through the hall seemingly ready to quell a riot. A school which, after having its pupils for two, three, or four years, has to station teacher-policemen throughout the assembly hall while the principal reads a few verses from the Bible, certainly is not a great success in training for citizenship. Where teachers as advisers and pupils are working together, where there is a club for every pupil and an adviser for every club, there can be such coöperative, constructive work that the whole spirit of the school makes for order and helpfulness.

Boys and girls like at times to be treated as grown-up young men and young women. Those Philadelphia high schools that follow, in so far as they can, college methods in classroom, have for such clubs as exist, activities appropriate almost entirely for older pupils. If the work in clubs makes for coöperation, initiative, leadership, and intelligent obedience to authority, there must be organizations suited to younger pupils. High school pupils are after all boys and girls, and the close relationship that can exist between the members of a club and their adviser is necessary for their guidance.

Some of the clubs in Philadelphia high schools spend so much time in writing a Constitution and forming the By-laws that they are then too exhausted to carry on any of the activities for which the club was formed. Formally and technically, the best Constitution of any club formed in Philadelphia high schools belonged to a club that could no longer muster a quorum. There is a temptation in club organization to put too great emphasis on the written constitution. The wiser plan seems to be to start the activities of the club, lay the emphasis on the accomplishment of what the club sets out to do, and finally, if and when necessary, evolve a constitution.

Many pupils have hobbies. The school in organizing and planning the work of its clubs needs to recognize these hobbies and get the pupils into the club where they can lead, and also to broaden the pupils'

interest by getting him into a club where he will have to follow. The pupil often wants to spend all his time on his hobby, and since regular lessons interfere, comes to hate his regular school work. It is necessary for the club, itself, through scholarship standards and through direct suggestions, to guide the member so that his work and interests are well balanced.

Against the plan of having clubs meet in a regular school period, some definite objections may be raised. The principal of the South Philadelphia High School for Girls, who with her teachers and pupils has worked out and put such a plan into operation, has pointed out certain of these objections. Where the whole school is organized so that all girls are either in their club meetings indoors or on their club excursions at the same time, and where a girl can belong, as a rule, to just two clubs, the element of the pupil's conscious choice may be a bit limited. It may, as the principal of this school where the plan is being worked out, says, "take away from the pupil who perhaps needs it most, a study period per week. To her, it must seem like compulsory play." This same principal adds, "In our school it adds materially to our organization difficulties, for there are forty fewer rooms per week in which to distribute the same number of teaching periods." It may also be added that it compels the school to use as advisers teachers who are not natural leaders and that it adds an hour a week to their rosters. Possibly other objections may be raised, but this school believes that in spite of the high cost of spending one-thirtieth of the school week in clubs, the advantages outweigh the disadvantages and that the plan is intrinsically sound.

Recommended:

1. That in schools where it has not yet been done, the principal or the director of extra-curricular activities, working with the teachers and the Students' Association or Senate, develop a constructive policy for organizing and developing school clubs.

2. That club work, where possible, grow out of classroom work and lead back to the class.

3. That the humanizing process of being a club adviser be open to every teacher.

4. That the different plans of organizing the club work in the girls' high schools, and especially in the South Philadelphia High School for Girls, be studied by all the high schools.

5. That there be developed in each high school a club for every pupil with a faculty adviser for every club.

6. That the principal of the school hold himself directly responsible for stimulating and guiding advisers and pupils so that each club has a worth while aim and is making progress toward its realization.

Musical Organizations. Practically all high school pupils like music. They may not like to master its technical difficulties as it is sometimes taught, but they respond to music. With competent leadership they like to sing, and many, both boys and girls, with the right stimulus in the home and in school will play some musical instrument. Fortunately this love of music exists in nearly every pupil. Music is probably the greatest immediate morale builder in the school.

These pupils will hear some kind of music all their lives. All will be consumers of music. They need training in appreciation. With intelligent direction, high school music can be so selected as to serve immediate interests and be made increasingly satisfying in higher levels of appreciation. Through the use of the orchestra or phonograph or an occasional special performer at the assembly period, pupils can hear good music. By wise direction the listeners can come to know the leading musical themes in a composition and they may gain some notion of the form of the composition. A knowledge of the origin of the composition may create interest. The selections sung in assembly can give not only the immediate satisfaction that comes through self-expression but can lead to higher levels of musical taste and interest.

The musical clubs—choruses, glee clubs and orchestras—are among the most prominent extra-curricular activities in the Philadelphia high schools. This is all the more surprising in the boys' high schools when one recognizes that, so far as musical instruction is concerned, those who are responsible for the courses of study have failed to provide in the schools any regular opportunity for the boys to study music. While there are music teachers assigned to the girls' high schools, none have been assigned to the high school for boys. No one in the high schools has been found who tries to justify on any educational ground this discrimination against boys. However, the orchestras in nearly all of the boys' high schools are large, in some cases excellently trained, and very popular. The orchestra in the West High School for Boys through its home concerts contributes very largely to the financial support of other extra-curricular activities. It even aids in supporting the football team. By both its home and outside concerts it has built up an excellent reputation in the community. The chorus as well as the orchestra in the Frankford High School has expressed the enthusiastic life of this school in music. The orchestra of the South Philadelphia High School for Boys is large and makes up in enthusiasm and vigor what it sometimes lacks in finished playing. The work accomplished in production of music in these boys' high schools is unusual.

That this extra-curricular musical activity is as good as it is in the boys' high schools is due to a few men in these schools who—while they give their whole time to teaching French or Art or to some academic

subject—yet make time after school to give leadership to this activity. The West Philadelphia High School for Boys gave a concert for the West Philadelphia High School for Girls at eight o'clock one morning and at that early hour it was necessary for the girls to come still earlier to be sure of a seat in the auditorium. The assembly singing may not be as ably led in all the high schools as it is at Germantown, but much is being done. The music work accomplished in these boys' high schools is due to a few able musicians and leaders on the school faculties rather than to any wise planning by the central school authorities for musical leadership in all these schools.

All of the high schools for girls have active music clubs. The chorus of one hundred fifty in the Frankford High School, three-fourths of whom are girls, not only gives its own concerts but coöperates with the local orchestras in the presentation of ambitious programs. The chorus in the Philadelphia High School for Girls is a carefully selected group that sings exceptionally well. The music club of the West Philadelphia High School for Girls is composed of singers, violinists, and pianists. Their program from two-thirty to three-thirty one afternoon a week is divided between a recital and a discussion of current musical events. In the South Philadelphia High School for Girls the candidates for membership are elected by a committee of three appointed by the director of the club—a different group for each voice trial. Qualifications for membership are voice, reading ability, and cleanliness and neatness. The eighty-two members are divided into forty first voices, twenty-nine second, and thirteen third voices. This club had a repertoire May 15, 1921, of the following choruses:

"Dance of the Pine Tree Fairies"	R. R. Forman	3 part chorus
"Down in the Dewy Dell"	Smart	3 " "
"A Song of the Sea"	R. M. Stultz	3 " "
"Serenade"	Schubert	4 " "
"Silent Now" (Barcarolle)	Offenbach	4 " "
"I Know a Bank"	C. E. Horn	2 " "
"A May Morning"	L. Denza	2 " "
"Who is Sylvia?"	Schubert	3 " "
"Indian Cradle Song"	H. A. Matthews	3 " "
"Love's Old Sweet Song"	Malloy	3 " "
"Annie Laurie"	Lady Scott	3 " "
"Murmuring Zephyr"	Adolf Jensen	3 " "
"May Dance"	Paul Lacome	3 " "
"Waltz and Chorus" (Faust)	Gounod	3 " "
"The Heavens are Telling"	Beethoven	2 " "
"Lift Thine Eyes" (Elijah)	Mendelssohn	2 " "
"The Mosquito's Serenade"	Loomis	1 part song

Considering the musical quality of the choruses, glee clubs, and orchestras, the assembly singing of the high schools has not the quality,

the power, the attack, the precision, the enthusiasm that one would expect. Some school principals and directors of assembly singing need to recognize that it is not always necessary to sing hymns, but that when hymns are sung they should be given with power, life, vigor, and precision. Assembly singing as a whole is listless and dull when compared with the energy and life of the product of the music clubs.

The entire city of Philadelphia seems interested in music, especially in the development and support of its orchestra. In the next three decades it is these pupils in the high school and others of their age who will determine the musical life of the city. Information concerning the weekly concerts of the Philadelphia Symphony Orchestra and the program to be presented should be made available to all the high schools. If there is to be intelligent appreciation and support given to the musical development of the city, some means should be found for providing a series of "Young People's Orchestral Concerts" at very reasonable rates for high school and music students of the city.

Recommended:

1. That musical instruction be provided in the boys' high schools and that adequate leadership thus be assured for choruses, glee clubs, and orchestras.
2. That more attention be paid in all the schools to training in appreciation of music.
3. That the value of good whole-hearted singing in assemblies be recognized and that the necessary leadership be provided for it.
4. That leadership be provided for joint glee club concerts and contests for all the girls' high schools and for all the boys' high schools.
5. That the school authorities make the school auditoriums freely available for orchestral and glee club concerts.

Excursions. Pupils of high school age want to go; they want to see and to understand their environment. Some of them really want to migrate, to become again nomadic. If no guidance is furnished, this tendency may result in an aimless meandering in the woods and parks or on Broad and Chestnut Streets. If the business of schools is "to teach pupils to perform better those desirable activities that they are going to perform anyway, and to reveal higher activities and at the same time make them desired and to an extent possible," then the excursion has a definite part to play in high school education.

The Philadelphia high schools recognize the importance of the excursion. There are often trips at the South Philadelphia High School for Girls beginning with the sixth, or club period, on Thursday afternoons. There are in many schools, trips after school, on Saturdays, and even whole school days devoted to expensive trips to Washington

or New York. In this examination of extra-curricular activities some fifty trips or excursions of high school pupils have been studied. There are trips to Colonial Philadelphia, to historic Germantown, to Valley Forge, trips to the annual exhibition at the Academy of Fine Arts, the Pennsylvania Museum and School of Industrial Art, the Bryn Athyn Cathedral, manufacturers of artists' materials, to Baldwin Locomotive Works, to the Federal Courts, to the Aquarium, to rock quarries, to the Wissahickon Creek for nature study, to the Navy Yard, to a meeting of the Drama League, to the theatre, to Overbrook, to the Academy of Natural Science to study birds, a star trip to study the fall constellations, a trip to the observatory, a trip to the Horticultural Hall at Easter, a trip to the Ambler School of Horticulture for Women, to the Museum of Archæology, University of Pennsylvania, geological trips to the Schuylkill, to private greenhouses, to the Zoölogical Garden, to the Curtis Publishing Company, and under the influence of Christopher Morley's "Travels in Philadelphia" a club explored Stonehouse Lane. These are a few of the many excursions that might be listed.

In some cases there has been preparation by the pupils for the trip. In preparation for the Stonehouse Lane exploration the pupils looked up maps and street guides and got all the information about it that was possible. One teacher writes: "At the first indoor meeting of the Nature Study Club, the girls proposed taking trips, so they were asked where they wished to go, and a number of places were suggested. As many of the pupils were studying fishes, on taking a vote it was found that the majority wished to go to the Aquarium. Therefore I went to see what fishes were on exhibition and to ask the superintendent if he would give a short talk." The group that went to the play *Abraham Lincoln* read poems about Lincoln as a preparation. The Washington trip that so many of the schools take is carefully prepared so far as trains, busses, hotels, and sightseeing, are concerned. The mechanics at least of the trips are worked out carefully, usually by the teacher.

The results of the trips are often of definite value. One member of the "Seeing Philadelphia Club—Industrial Section," after visiting a big publishing house said: "Among other things I learned that with an efficient system, thousands of persons can be employed, and a boundless amount of work accomplished, without confusion"; or, again, "I learned that a building can hold a great many large machines, turn out a great deal of work, and yet be kept clean." Another says of the excursions, "I saw things I would not have known or seen otherwise."

The excursions should be a part of the regular work of the class, should be curricular rather than extra-curricular. There are field trips just as important for the Physics Class as for the Botany. The trips

should be planned, worked up, and carried out largely by the pupils. It is the business of the teacher to stimulate, guide, supervise, check up, and say "no" when necessary. Much of the value of the trip to an aquarium lies in the pupils' finding out what fishes are on exhibition and in getting the training that comes in securing an interview with an adult and getting him to speak to the group.

In making an excursion that is really educational, there are certain fairly definite steps that may be followed. To carry out the work of the class or club, there is a variety of excursions that may be taken. By discussion, anticipatory interest is aroused and a particular trip is selected. The teacher, club president, or adviser, should appoint the necessary committees to arrange the route and handle the finances, to plan the program and secure the expert leadership that may be necessary, to read up on the various phases of what is to be seen or heard—this last point may take one or several committees. All these committees will report briefly to the class or club. From these reports, certain definite questions will be formulated which all should be able to answer after the excursion. The teacher who conducts this excursion must be able to organize the questioning and discussion of what was seen. The club president or adviser or classroom teacher sees that the answers to the question have been prepared and learned. The results of the trip may be used in oral or written composition, or some members of the group who have done especially good work may visit other classes or clubs and tell of the excursion. Still others may write it up for the school paper.

The excursion enables the pupils to satisfy their desire to understand their environment; it enables pupils to have experience in planning and carrying out real activities and learning how to work together; it supplements the work of the school by enabling the pupils to perform desirable activities better and with more satisfaction than they could have performed them alone. It gives experience and real opportunity to evaluate, organize, and express thought. Because of its satisfying quality it leads on to more activity in the same field.

Recommended:

1. That excursions be carefully planned and closely connected with regular class work.

2. That teachers stimulate and supervise the activity of the pupils in working out excursions but not rob the pupils of educational opportunities by doing the work for them.

3. That teachers check up the results of excursions carefully but at the same time not destroy the spontaneous fun that is so real a part of an excursion.

4. That an approved excursion which for good reasons can not be scheduled for after-school hours be carried out on school time, when the school program permits.

Student's Handbook. There should be a Student's Handbook of convenient vest-pocket size for every high school pupil. Such a book should contain the aims and aspirations of the school, the organization and administration of extra-curricular activities, the organization and administration of the academic and routine work of the school.

In presenting the aims of the school there should be a historical sketch of the institution and what it has stood for, an account of the material being of the school—the building, the classrooms, offices, gymnasiums, the lockers, the scheme of decoration, and the plans for the care of the building. There should be also in this part of the handbook a general authoritative statement from the principal of the plan of whatever type of coöperative government and administration exists in the school. In addition, there should be an attempt to state the school's creed and to put down as definitely as possible in words the spirit of the school.

A second part of the handbook should be devoted to pupil activities. Here should be presented the Constitution of the Senate or Students' Association and the special regulations that this association, with the aid of the adviser or director of student activities and the principal, has made for regulating all the extra curricular activities in which the pupils participate. Such items should be included as the chartering of clubs, the regulations concerning membership in these clubs, the home room organization, the athletic association, the school paper, the assembly, the musical organizations, an account of the work of the dramatic and all other clubs. There would be included also an account of the alumni or alumnae associations.

In a third part there should be an account of the departments of instruction, the various curricula briefly set forth, a list of the faculty by departments, and where the members of the faculty may be found.

A fourth part should contain an explanation of the organization and administration of the schools. Everything should be presented here that the incoming pupil needs to know about the mechanical organization of the school. Such topics should be included as how and when to register, the scheme of the pupils' schedule or roster, the schedule of the school day, the amount of work each pupil can carry, the credits, the requirements for graduation, the marking system, the use of the library and study hall, and such information as would help the pupils and teachers, especially the new ones, to feel at home in the school environment.

The fifth division might contain the special features of the school, the intimate life of the school, its traditions and its great achievements.

Finally, there should be the school songs and cheers and a statement of the school's spirit of sportsmanship.

The purpose of the whole book is through conveying definite information and the spirit of the school to establish right school habits and a certain mental attitude toward the school and all its activities. It is difficult for one who has been long in a school to realize how strange the school and all its ways are to the more or less frightened pupil who is just entering. Wherever possible this Students' Handbook should be studied by the pupil in the term preceding the time when the pupil is to enter the high school. It would serve as a guide for all pupils throughout their high school course. Parents of all pupils should read it carefully.

This handbook should be prepared by the Students' Association with the aid of all club officers, the teachers, the principal and his office, and with the special aid of the director of pupil activities. The principal or his office force could prepare the solid information of the book, but the flavor and point of view would probably be that of the office rather than that of the pupils. The incoming pupil gets the information about the ways of the school and how to behave from other pupils rather than from the teachers. The pupils can tell each other the life of the school a great deal better than can the teachers. This does not mean that the principal and teachers should not aid and direct, when necessary, in the preparation of the handbook and finally review it carefully before it is published, but it does mean that the Students' Association should assume the responsibility of preparing the manuscript.

The preparation of such a book can be one of the best English problems that could occupy a class or several classes. The data from the school would be collected, evaluated, and organized. Scores of handbooks from other high schools all over the country would be secured and studied, and, finally, after the pupils have something to say, there would be the problem of saying it in the best possible way. The writing of such a book offers so many opportunities for real training that the teachers must not rob the pupils of the chance. In the end, the pupils with the aid of the teachers will produce a much better book than can the principal and teachers working independently of the pupils.

In some large high schools the publication of the student handbook is financed by the Board of Education; in others the Board furnishes the paper and the pupils do the printing and binding; and in still other high schools, the Students' Association finances the book and sells it to the pupils at cost—ten or fifteen cents per copy.

No such book has been found in any Philadelphia high school. In some neighboring cities every high school has a students' handbook. Fortunately some Philadelphia high schools are already at work on plans for such a book as has here been suggested.* The West Philadelphia High School for Girls already has the outline of its handbook prepared. The Philadelphia High School for Girls has a Teachers' Handbook in manuscript form that contains much very valuable material for a student handbook. The South Philadelphia High School for Girls has just published a "Manual of Manners" that would furnish the copy for a part of this book. The William Penn High School for Girls has in manuscript "What William Penn Students Say of Student Government" and also the plan and spirit of the scheme of pupil participation in school government now in operation in that school. This manuscript would be of great aid in preparing a students' handbook. All the girls' high schools, except possibly one, are ready to go ahead with the preparation of a students' handbook.

Recommended:

1. That each Philadelphia high school prepare and publish a Student Handbook.

2. That the responsibility of preparing the manuscript for such handbooks be assumed by the Student Associations under the supervision of the adviser or director of extra-curricular activities.

SUMMARY OF RECOMMENDATIONS

Home Rooms. 1. That every home room organize itself to direct its own immediate affairs and to coöperate with every other home room.

2. That a fifteen minute home-room period be a part of the daily schedule.

3. That the principal of each school, with the aid of his teachers, and with the aid of the supervisor of all the high schools, work out the general plan of home room organization for his school.

4. That the teacher guide the pupils rather than dictate to them the way of meeting their responsibilities in the home room.

5. That pupils, guided by the teacher when necessary, elect their own leaders or representatives.

6. That the representatives when elected actually work with and represent their groups rather than form with other representatives a detached body dispensing laws for their groups.

Class Organizations. 1. That with the aid of a teacher adviser each of the eight classes in the high school organize itself.

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*See Addenda.

2. That two representatives from each home room be elected to form the class congress.

Pupils' Council. 1. That an Association or Senate composed of pupils representing every home room of the school and of a teacher or teachers appointed by the principal, direct the extra curricular activities of the school.

2. That principals and teachers recognize and use the educative opportunities offered by pupil participation in school government for training in citizenship.

3. That the activity of the Association be a vital part of the home room and of the class organizations rather than that all power be conferred on a few representatives and the constituency cease to function.

4. That the principals, or their assistants, aid in guiding the stated meetings of the representatives of the Student Associations so that there shall be discussion definite and active on important phases of extra-curricular activities.

5. That all principals and advisers of pupil activities study the organization and method of work of the Students' Association of the William Penn High School for Girls.

6. That the principal stimulate and guide pupil organization and exercise the veto power when necessary.

Supervisor of Extra-Curricular Activities. 1. That there be appointed in each high school an assistant to the principal whose first duty is to supervise the extra-curricular activities of the school.

Play on School Teams. 1. That provision be made in gymnasiums and on playing fields for every pupil to participate actively in physical play.

2. That leadership be provided which will not only develop school teams but will arrange and carry out attractive play programs for all high school pupils.

3. That in organizing and carrying out the play programs, provision be made for developing the pupil's initiative, leadership, coöperation, and intelligent obedience to authority.

School Dances. 1. That the school establish standards and, where parents approve, provide opportunity for social dancing.

The Assembly. 1. That the educational importance of the assembly period be recognized by the whole school.

2. That the assembly programs be carefully planned by a committee of faculty and pupils.

3. That problems affecting the whole school be discussed in assembly by faculty and pupils.

4. That assembly programs be devoted to the installation of Senate or Student association officers and to the awarding of all school honors.

6. That emphasis in assembly programs be placed on pupil participation rather than on the direct activity of the principal, faculty, or outside speakers.

7. That classroom work of general importance to the whole school have a place in the assembly programs.

8. That assembly programs for "Special Days" be presented by pupils rather than by outside speakers.

9. That assembly music, singing especially, receive more attention.

10. That the practice of having two pupils give declamations or orations at each assembly be discontinued.

11. That assemblies begin and end on time.

School Publications. 1. That each Philadelphia high school publish a school newspaper.

2. That the present type of school magazine be given up.

3. That if a school after developing its newspaper finds it can support a magazine, it publish one of high grade literary worth.

Clubs. 1. That in schools where it has not yet been done, the principal or the director of extra-curricular activities, working with the teachers and the Students' Association or Senate, develop a constructive policy for organizing and developing school clubs.

2. That club work, where possible, grow out of classroom work and lead back to the class.

3. That the humanizing process of being a club adviser be open to every teacher.

4. That the different plans of organizing the club work in the girls' high schools, and especially in the South Philadelphia High School for Girls, be studied by all the high schools.

5. That there be developed in each high school a club for every pupil with a faculty adviser for every club.

6. That the principal of the school hold himself directly responsible for stimulating and guiding advisers and pupils so that each club has a worth while aim and makes progress toward its realization.

Musical Organizations. 1. That musical instruction be provided in the boys' high schools and that adequate leadership thus be assured for choruses, glee clubs, and orchestras.

2. That more attention be paid in all the schools to training in appreciation of music.

3. That the value of good whole-hearted singing in assemblies be recognized and that the necessary leadership be provided for it.

4. That leadership be provided for joint glee club concerts and contests for all the girls' high schools and for all the boys' high schools.

5. That the school authorities make the school auditoriums available for orchestral and glee concerts.

Excursions. 1. That pupils' excursions be carefully planned and closely connected with regular class work.

2. That teachers stimulate and supervise the activity of pupils in working out excursions but not rob the pupils of educational opportunities by doing the work for them.

3. That teachers check up the results of excursions carefully but at the same time not destroy the spontaneous fun that is so real a part of an excursion.

4. That an approved excursion which for good reasons can not be scheduled for after-school hours be carried out in regular school hours, where the school program permits.

Student Handbook. 1. That each Philadelphia high school prepare and publish a Student Handbook.

2. That the responsibility of preparing the manuscript for such handbooks be assumed by the Student Associations under the supervision of the adviser or director of extra-curricular activities.

ADDENDA

1. The Superintendent of Schools reports that a recommendation is being made to the Board to the effect that there be appointed in each high school an Assistant to the Principal whose duty is to supervise the extra-curricular activities of the school.

2. The Superintendent of Schools reports that the William Penn High School has now published a students' handbook of information, and the Philadelphia High School for Girls has one in preparation.

CHAPTER V

FOREIGN LANGUAGES

Method of Procuring and Organizing Material. The material for this report on the teaching of foreign languages in the high schools in Philadelphia was procured by spending from one to two days at each high school. It was consequently possible to see in each case from five to six teachers in action besides having a conference of an hour or more with the head of the department. The entire recitation period with but few exceptions was spent with every teacher whose classes were visited. This was done to afford the teacher an opportunity to show in full how he conducted his work. The head of the department was asked in detail concerning his course of study, in regard to his aims and purposes, and concerning his ideas of organizing and conducting a department of foreign languages.

Information was procured, moreover, through a questionnaire that was sent to the individual teachers, asking for the enrollment in their classes, for their own professional and scholastic training and preparation, for their years of experience, and for the number of their teaching periods per week.

To judge the achievements of foreign-language instruction at the several high schools, standardized tests in French and Latin were administered to a large number of the first and second-year pupils. These tests were given by the teachers under the guidance of the surveyor.

The material that was collected in the way outlined above, gathers quite naturally about the following points: (1) The organization and qualification of the teaching force; (2) The pupil enrollment by grades in each of the foreign languages; (3) The course of study; (4) The character of instruction; (5) The results of the tests.

Organization and Qualification of Foreign-Language Teaching Force.—Heads of Departments of Foreign Languages. The teachers of the ancient and modern foreign languages are organized into one department at all of the high schools in Philadelphia except one, where there are two heads, the one for Latin and Greek, the other for French and Spanish. At Schools L, I, G, F, and A, the work is under a department head with special training in Latin and Greek; at Schools H, C, E, and D, on the other hand, it is under one specially trained in the modern languages. At School B there was no organized department at the time of this survey.

The several heads of the departments of foreign languages have all had thorough training in subject matter. This is shown in part by the degrees they hold. Among the eleven, there are four who have taken the degree of Doctor of Philosophy; five the degree of Master of Arts; two the degree of Bachelor of Arts, and one with preliminary training in Germany, the equivalent of an American collegiate education, and three years' study in languages at an American university.

The several heads of the foreign-language departments are all experienced teachers. The length of this experience ranges from seventeen years at School A to thirty-six at School L. The median number of years is 24.5. In their present positions they have been from three and one-half years at School C to twenty-three at School L. Half of the heads have taught from twenty-four to thirty-two years, and have been from six to nineteen years in their present positions.

According to the table below the teaching load of the heads is heavy. At School L, with a department of 16 teachers, the head is assigned 21 forty-five-minute periods of teaching each week, an average of over four periods a day. At School I, with a department of thirteen teachers, the head teaches an average of over five periods a day. In fact, the department heads carry a pupil-hour load ranging from 174 at School C to 423 at School H. With so many teaching periods, the department head has no time for one of his major duties, the supervision of the work of his teachers. The efficiency and uniformity of the teaching is lessened in consequence.

In one school, for instance, pupils in French or Spanish were being instructed either according to the conversational or the grammar-translation method, depending in each case upon the teacher to whom

TABLE 1.—WEEKLY TEACHING LOAD OF DEPARTMENT HEADS, FEBRUARY–JUNE, 1920

In the table below are enumerated the weekly forty-five-minute teaching periods, the weekly pupil hours for February, the beginning of the semester, and for June, the end of the semester, and the subjects of the several department heads.

Head.	Weekly Periods.	Pupils.	Weekly Pupil Hours.		Subject.
			February.	June.	
L	21	95	291½	282	Latin, French
I	26	109	370	315⅓	Latin, Greek
H	19	145	432	423	French
G	23	108	277⅓	260	Latin, Greek
FK	17	99	326¼	317½	Latin, Greek
CJ	16	63	177	174	French, Spanish
T	14	75	209¼	209¼	Latin, Greek
T	18	61	210¼	210¼	Spanish
E	14	104	351¾	341½	French
D	14	70	370½	370½	French
A	16	85	234	228	Latin
Medians	17	95	291½	282	

TABLE 2.—TEACHERS AND PUPILS UNDER VARIOUS HEADS, FEBRUARY–JUNE, 1920

The number of teachers and pupils under the head of the various foreign-language departments at the high schools in Philadelphia ranged from 5 to 21 and 753 to 3360, respectively, during the spring of 1920. The exact number, the department head and his pupils not being included, was in each case as follows:

School.	Number of Teachers.	Number of Pupils.
L	15	2,494
I	11	2,393
H	10	1,906
G	9	1,805
FK	21	3,360
CJ	8	1,251
T	7	759
T	7	979
E	6	885
D	11	1,615
A	5	753
Medians	9	1,615

they chanced to be assigned. This is unfortunate, for it makes coördination exceedingly difficult. Pupils coming from a teacher that uses the grammar-translation method, are at a loss for a considerable length of time in a class conducted according to the conversational method.

Teachers of Foreign Languages. Judged by the degrees that the teachers of foreign languages at the high schools in Philadelphia have taken, and by the names of the institutions that graduated them, they have had, for the most part, very thorough training in the subject matter that they are now teaching.

Among the 99 teachers, not including the eleven department heads and teachers with foreign training, there were 41 teachers with the degree of A.B., 31 with the degree of A.M., and 12 with the degree of Ph.D. Many of the degrees of Master of Arts, to be sure, were not granted on the basis of work actually done, but, according to the custom of many colleges, after three years of successful experience subsequent to graduation.

TABLE 3.—DISTRIBUTION OF ACADEMIC DEGREES BY SCHOOLS

The following table shows how many of each degree were represented among 109 department heads and teachers at the high schools from February to June, 1920.

School.	L	I	H	G	FK	CJ	T	E	D	A	B	Total.
A.B.	5	3	5	2	6	2	11	1	4	2	2	43
B.S.	..	1	1	3	4	2	..	1	1	..	1	14
Ph.B.	..	..	..	..	..	1	..	..	..	..	..	1
A.M.	5	6	3	3	5	3	..	3	5	..	2	35
Ph.D.	5	1	2	1	3	1	1	..	1	1	..	16
Total	15	11	11	9	18	9	12	5	11	3	5	109

These degrees had been granted by 32 different colleges and universities. Pennsylvania, Bryn Mawr, Princeton, Cornell, Temple, Swarthmore, and Wellesley are represented most frequently.

The teachers of foreign languages, moreover, have all had considerable experience. Among 114 of them, including teachers with foreign training, the years of experience with the number of teachers involved in each case are as follows:

TABLE 4.—PROFESSIONAL SERVICE OF TEACHERS IN YEARS

Number of Teachers.	Years of Experience.	Number of Teachers.	Years of Experience.
1	39	6	17
1	38	3	16
1	35	8	15
3	33	10	14
1	31	6	13
1	30	7	12
2	29	6	11
2	28	5	10
2	27	5	9
4	25	5	8
4	24	2	7
5	22	2	5
3	21	5	4
2	20	3	3
1	19	2	2
4	18	2	1

The median number of years of experience is 14.7. The central tendency is 14 years. Half the teachers have had experience between 10 and 21 years.

The number of pupils for which each teacher of foreign languages was responsible during the spring of 1920 ranged from 80 to 303. The median number was 145.8 pupils. According to the standards set by the North Central Association, the recommended number is 159; the maximum permitted, not over 180.

The median number of pupil-hours a week carried by these teachers in the spring of 1920, was 459.5, with a range from 240 to 737. There were 11 different teachers who carried from 610 to 737 pupil-hours; and only 7 with fewer than 315 such pupil-hours.

The standard that was recommended by the North Central Association is 750 weekly periods of 45 minutes each, and the maximum permitted 900 such weekly periods. Changing these forty-five-minute periods to clock-hours, the result would be: recommended 562½ pupil-hours, maximum 675. Measured by these standards the teaching load was usually too high.

Pupil Enrollment in Foreign Languages. In the table below, the total enrollment in foreign languages at all the high schools in Philadelphia is given, language by language, and as a whole, by numbers and percentages. Under each language the total number of pupils who were taking the language in question is enumerated in the first of the two columns, and the percentage that this number formed of the total language enrollment at the particular school, in the second. At School L, for instance, 1252 pupils were enrolled in Latin, which is 42.6 per cent of 2935, the total language enrollment at that school. In Greek there was an enrollment of 124 pupils, or 4.2 per cent of the total language enrollment of 2935. In the case of French and Spanish, the percentage of the whole was 38.5 and 14.6, respectively.

TABLE 5.—TOTAL FOREIGN LANGUAGE ENROLLMENT BY SCHOOLS AND LANGUAGES, MAY, 1921

School.	Latin.		Greek.		French.		Spanish.		Total.
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
L	1,252	42.6	124	4.2	1,129	38.5	430	14.6	2,935
I	454	19.6	13	0.6	832	35.9	1,016	43.9	2,315
H	710	36.2	...	...	874	44.5	379	19.3	1,963
G	601	33.6	67	3.7	598	33.4	523	29.2	1,789
FK	757	24.6	...	...	1,566	50.9	755	24.5	3,078
CJ	354	29.1	...	...	489	40.2	372	30.6	1,215
T	658	36.4	89	4.9	813	45.0	246	13.6	1,806
E	194	16.7	...	...	531	45.8	434	37.4	1,159
D	555	22.9	...	...	1,329	54.8	541	22.3	2,425
A	180	24.7	...	...	567	50.3	182	25.0	729
B	135	20.2	...	...	289	43.3	243	36.4	667
Total	5,850	29.1	293	1.5	8,817	43.9	5,121	25.5	20,081

The table above shows that Latin had relatively the largest pupil enrollment at two schools, L and G. French had the largest enrollment relatively at all the remaining high schools except School I, where Spanish took the lead. Greek was taught at but four schools, L, I, G, and T. The total enrollment shows only 30.6 per cent belonging to Latin and Greek, that is, 29.1 and 1.5 per cent, respectively; while 69.4 per cent, on the other hand, belong to French and Spanish, that is 43.9 and 25.5 per cent, respectively.

Latin. The table below shows the distribution of the pupils in Latin over the eight semesters at each of the high schools in Philadelphia. The decrease in enrollment is quite marked at all the schools, semester by semester. At School E the number of pupils taking Latin, if one considers the size of the high school, 2352 pupils, was exceedingly small. Some of the classes numbered only nine pupils. The pupil distribution was irregular, too, at Schools D, A, and B, where the work of the upper semesters was alternated and combined. The decrease

in enrollment semester by semester, it should be noted, is not quite so bad as it appears, for the entering class of 1920 was somewhat larger than that of 1917. It is, however, worthy of note that a large majority of the pupils in Latin pursue this language but a short time.

TABLE 6.—DISTRIBUTION OF LATIN PUPILS BY SCHOOLS AND SEMESTERS, MAY, 1921

School.	Semester.								Total.
	I	II	III	IV	V	VI	VII	VIII	
L	352	229	212	142	96	76	62	81	1,252
I	113	77	67	65	45	38	28	21	454
H	192	182	120	60	50	43	28	30	710
G	203	135	93	79	37	17	24	13	601
F	163	150	71	114	74	87	52	46	757
C	109	76	38	47	29	17	20	18	354
T	175	101	96	68	60	69	33	56	658
E	69	37	32	16	9	11	11	9	194
D	133	247	90	23	24	15	23	..	555
A	68	29	30	21	5	11	16	..	180
B	32	34	24	13	13	19	..	..	135
Total	1,609	1,297	873	648	444	408	297	274	5,850

According to the above table there were 5850 pupils studying Latin at all the high schools of the City, but only 2944, or 50.3 per cent, were studying that language beyond the first year; only 1423, or 24.3 per cent, were continuing their study of Latin beyond the second year and but 571, or 9.8 per cent, beyond the third year. This is worthy of note, for the pupils of the first year in Latin were all taught as if they would continue the study of Latin for at least three more years. The work in the first year aims, in consequence, at complete knowledge of grammar and the reading of Cæsar, and all the pupils are groomed for a task which less than ten per cent fulfill.

Since so many pupils are eliminated at the end of one year, and another group at the end of the second year, a serious question arises as to the value of this study for these pupils. Less emphasis should be laid upon completeness of grammar. The fundamental principles should be taught as simply, concisely, and clearly as possible, and in connection with the text. During the early stages of Latin teaching, the meaning of Latin words in connected narrative or discourse should receive more attention. The acquisition of a vocabulary through direct contact, that is, through reading, or in conversation, should be one of the chief ends of the teaching. Since words acquire meaning from the context in which they are used, pupils should meet them in as many different relations as possible. Definite word-study exercises, moreover, should show the close relation between English and Latin. The courses in Latin should also be enriched by a study of Roman civilization and its contribution to world progress.

Wholly in accord with this plan are the following words by Dean West, "Value of the Classics," p. 16:

> "Thus the boy is continually finding the grammar inside the used and usable language, instead of trying first to find the language in the grammar. He begins to learn the rules of the game by watching and trying the game. He may next go on to understand the game better by mastering the rules. This done he knows how to play the game. How well he will play it then depends mainly on himself."

Greek. The table below gives the enrollment in Greek, semester by semester. This language was taught at only four high schools. The decrease from semester to semester was not so great as in the case of Latin, and yet only 38.6 per cent of the pupils studying Greek were doing work beyond the second year. Only six semesters' work was offered.

TABLE 7.—DISTRIBUTION OF GREEK PUPILS BY SCHOOLS AND SEMESTERS, MAY, 1921

School.	Semester.						Total.
	I	II	III	IV	V	VI	
L	41	21	14	13	20	15	124
I	..	..	5	2	1	5	13
G	25	12	6	12	7	5	67
T	27	9	20	12	11	10	89
Total	93	42	45	39	39	35	293

The table below shows what number and percentage of the pupils studying Greek pursued that language after the first, or the second year. Because of the fact that many pupils take but one or two years of Greek, the work during the early stages in the teaching of this language should also be enriched, to make it worth while to all pupils as far as pursued.

TABLE 8.—DISTRIBUTION OF GREEK PUPILS BY STAGES OF ADVANCEMENT, MAY, 1921

158 pupils, or.....67.2 per cent beyond.....year I
74 " " .....38.6 " " " .....year II

At present the teaching of Greek in Philadelphia is unduly expensive. The classes at two of the high schools where it is now being taught are very small above the first year.

At present some deserving pupils are denied the privilege of studying Greek as too few elect this subject at most of the schools to warrant the formation of classes. Any boy or girl, capable and desirous of studying Greek, should be afforded an opportunity to do so.

In order to make this possible, two or three centers should be established throughout the city, where Greek will be offered. The

pupils could go there for Greek on certain days, and double periods could be arranged to reduce the number of such visits. School T and School L should be two of these centers, for the traditions of these schools are in favor of the teaching and study of Greek. School G might well teach first-year Greek, but for the remainder of the work, the Greek pupils of this school, according to present indications, should also go to some other center.

French. With the total pupil enrollment as a basis of comparison, there were many pupils studying French at all the high schools in Philadelphia.

At Schools G, E, A, and B, although four years of French are offered, the French pupils above the sixth semester were quite few in number. School G had none; School E, only 10; School A, 16; and School B, 21. In fact, the French classes were rather small at all the schools during the upper semesters. It should be noted that this small enrollment in French may be due in part at least to the fact that the study of German was discontinued at the outbreak of the war and the arrangements for modern-language teaching were considerably disorganized.

TABLE 9.—DISTRIBUTION OF FRENCH PUPILS BY SCHOOLS AND SEMESTERS, MAY, 1921

School.	Semester.								Total.
	I	II	III	IV	V	VI	VII	VIII	
L	381	225	247	76	46	77	42	35	1,129
I	177	158	104	101	131	76	57	28	832
H	114	172	135	187	83	62	99	22	874
G	163	200	92	87	41	15	..	..	598
F	329	338	187	322	189	122	39	40	1,566
C	121	107	104	77	29	35	7	9	489
T	252	199	92	119	31	87	19	14	813
E	124	119	154	71	26	27	10	..	531
D	479	245	106	272	65	113	32	17	1,329
A	101	80	57	70	14	29	16	..	367
B	100	59	52	31	10	16	21	..	289
Total	2,341	1,902	1,330	1,413	665	659	342	165	8,817

Of the four foreign languages that are taught at the high schools of Philadelphia, French has by far the largest enrollment. Only a small percentage of the pupils, however, were enrolled in the upper grades. In fact, only 4574, or 51.0 per cent, of the 8817 pupils studying this language, were doing work above the first year. Beyond the second year, there were only 1831 pupils, or 20.8 per cent; and in the fourth year there were enrolled 507 pupils, only 5.7 per cent, of the total enrollment in this language.

Since so small a percentage of the pupils in French study the language beyond the first year, it is not economical to have the courses

organized and taught as though the pupils would continue under the teachers' direction for two or three years longer. The work should evidently be adapted somewhat more to the needs of those that take but little. Many details of grammar are being taught to first and second year pupils that are needed only for advanced study. These demands of grammar can be satisfied when there is a call for them.

TABLE 10.—DISTRIBUTION OF FRENCH PUPILS BY STAGES OF ADVANCEMENT, MAY, 1921

4,574 pupils, or	51.9 per cent, beyond	year I
1,831 " "	20.8 " " "	year II
507 " "	5.7 " " "	year III

Spanish. There were but few pupils taking Spanish beyond the first year. The enrollment is still smaller after the second year; this is doubtless due to the fact that Spanish has been but recently emphasized. At only one high school, School L, was there a class in High XII. Only three schools reached Low XII. School T had but two years of work in Spanish. The largest enrollment fell to this language at School I.

TABLE 11.—DISTRIBUTION OF SPANISH PUPILS BY SCHOOLS AND SEMESTERS, MAY, 1921

School.	Semester.								Total.
	I	II	III	IV	V	VI	VII	VIII	
L	152	103	81	40	24	7	11	12	430
I	341	272	164	99	42	74	24	..	1,016
H	113	68	57	54	25	62	..	..	379
G	234	168	80	28	7	6	..	..	523
F	257	180	116	118	50	24	10	..	755
C	185	91	59	26	11	..	..	..	372
T	131	84	18	13	..	..	..	..	246
E	194	99	93	37	11	..	..	..	434
D	299	98	87	57	..	..	..	..	541
A	76	45	30	21	10	..	..	..	182
B	99	82	31	20	11	..	..	..	243
Total	2,081	1,290	816	513	191	173	45	12	5,121

Not much more than one-third, 34.2 per cent, of the pupils in Spanish had studied it more than one year. No more than 421, 8.2 per cent, of the total 5121 pupils in Spanish, did work beyond the second year; and only 57 pupils out of the total 5121, or 1.1 per cent, were doing work in Spanish of a grade higher than the work of the third year. The work of the first and second years should evidently be carefully organized to meet the needs of the large number of pupils who do not continue the study of Spanish. They should be more thoroughly grounded in the fundamentals, and be spared the details of grammar that are of benefit to advanced pupils only.

TABLE 12.—DISTRIBUTION OF SPANISH PUPILS BY STAGES OF ADVANCEMENT, MAY, 1921

1750 pupils, or	34.2 per cent,	beyond		year I
421 " "	8.2 "	"	"	year II
57 " "	1.1 "	"	"	year III

Course of Study in Foreign Languages. The course of study in foreign languages presented a remarkable lack of uniformity among the high schools of Philadelphia. A comparison of the courses of study at some representative high schools will make this fact evident.

According to the city program of studies, as shown in Table 13, the *academic curriculum* requires two years only of foreign language; and this may be two years of French, Latin, or Spanish. If the pupil's first language is Latin, he may in addition to continuing the subject, elect Latin composition during the last two years of the high school course for two periods a week. The second foreign language may be any one of the foreign languages besides Latin that the school may be offering, French, Spanish, or Greek. According to the outline below, a pupil in the academic curriculum must take 16 weekly forty-five-minute periods and may elect to the number of 64 of a total number of 160 required for graduation.

No foreign language is required in the *commercial, mechanic arts,* or *home-economics curriculum.* In the case of the commercial and home-economics curricula, however, there is one restriction; the pupils must take either etymology or some foreign language, usually French or Spanish, during the first two semesters. The pupils of the mechanic arts curriculum may elect etymology or a foreign language if they choose. According to the city program of studies, it should be stated, moreover, English is the only prepared subject required in the Second Year of the home-economics curriculum, and foreign language is the only elective scheduled. Such an arrangement really makes foreign language required during that year.

TABLE 13.—NUMBER OF WEEKLY FORTY-FIVE-MINUTE PERIODS BY CURRICULA AND SEMESTERS, CITY PROGRAM OF STUDY

ACADEMIC CURRICULUM

Study.	Semester.								Total.
	I	II	III	IV	V	VI	VII	VIII	
First Language	4	4	4	4	4*	4*	4*	4*	16–64
Latin Composition	..	..	..	..	2*	2*	2*	2*	.....
Second Language	..	..	4*	4*	4*	4*	4*	4*	.....

* Optional.

According to the last column, 16 weekly periods were required and 64 permissible.

COMMERCIAL, MECHANIC ARTS, HOME ECONOMICS CURRICULA

Study.	Semester.								Total.
	I	II	III	IV	V	VI	VII	VIII	
Any Language.....	4*	4*	4*	4*	4*	4*	0	0	0–24

* Optional.

No school follows the city program of study in every particular, and Table 14 shows the actual lack of uniformity in foreign-language requirements. The high schools for boys show a marked variation, requiring foreign language of all pupils, even in the mechanic arts and commercial curricula.

At School L, for instance, 44 weekly periods are required of the commercial pupils. This requirement embraces the study of two foreign languages, extending in all over twelve semesters. At School I and School C, the boys of the commercial curriculum also have to study foreign language for eight and six semesters, respectively.

In the mechanic arts curriculum the boys' high schools also require foreign languages of their pupils: 28 periods at School L, 32 periods at School I, and 24 periods at School C.

It is worth noting that these schools vary in their foreign-language requirements not only from the prescriptions of the city program, but also among themselves. Where School C requires 20 periods, School I requires 32 and School L requires 44.

In the academic curriculum there is an even greater variety, from 16 required periods, according to the city program, to 56 at School C, 61 at School D, 64 at School I, 68 at School T and 72 at School L. The pupils with aptitudes and ability to do language work are well provided for at all the schools. It is questionable, however, whether all pupils even in the academic curriculum should be required to study as much foreign language as many of the high schools require. Progressive high schools in other large cities have found it best to make the language requirements of their academic curriculum more flexible, as most colleges admit students today with no more than two years of foreign language.

According to the city program of studies there are 16 weekly forty-five-minute periods of foreign languages required and 64 permissible in the academic curriculum; none required and 24 permissible in the commercial, mechanic arts, and home economics curricula.

At School L there are 72 weekly forty-five-minute periods required in one academic curriculum and 50 in the other, 44 in the commercial, and 28 in the mechanic arts.

TABLE 14.—SUMMARY OF WEEKLY FORTY-FIVE-MINUTE PERIODS BY CURRICULA AND SCHOOLS

	Academic.		Commercial.		Mechanic Arts.		Home Economics.	
	Required.	Permissible.	Required.	Permissible.	Required.	Permissible.	Required.	Permissible.
City Program	16	64	0	24	0	24	0	24
School L	72	0	44	0	28	0	..	..
	50	0	..	..	..	..	..	..
School I	64	0	32	0	32	0	..	..
School C—Boys	56	0	20	28	24	0	..	..
Girls	32	0	0	20	..	..	..	..
School T	68	86	..	..	..	..	..	..
School D—One	32	35	0	21	..	..	0	20
Two	61	0	..	..	..	..	..	..
School A	32	56	0	24	..	..	0	24

At School I there are 64 weekly forty-five-minute periods required in the academic curriculum, etc.

At School D there are 32 weekly forty-five-minute periods required and 35 permissible if the pupil elects the academic curriculum with one foreign language, and 61 required if she elects the academic curriculum with two foreign languages.

Review of Foreign-Language Instruction. The comments of the following pages are based on observations that were made in the classroom. With few exceptions the entire period was spent with the teacher whose class was visited. At each school at least one whole day was used for this purpose, at some two.

Latin. The traditional approach to this ancient language was apparent in almost all the classrooms. The method of presentation aimed at extensive knowledge of paradigms and syntax.

The teachers as a whole knew their subject matter exceedingly well. This fact was always apparent. Very seldom, however, did they make an attempt to vitalize their work. The object of the recitation was for the most part recall and drill, and most of the teachers' work consisted in hearing the pupils recite. Recitations were rarely socialized and the pupils when reciting felt no responsibility to their classmates. There were some notable exceptions, especially in the teaching of Cicero and Virgil, where it was a pleasure to attend the recitations.

Much stress is still laid on abstract rules. The teachers do this, doubtless, with the hope that their pupils may some time use them. Since these rules have no intrinsic value in themselves, it is apparent that they should be taught to pupils only so far as they are demanded for an intelligent reading of the context in hand.

The following rule on the use of the dative is an illustration of the method of teaching first-semester Latin at most of the high schools. It contains all the possibilities of the use of this case that the pupil

would ever meet, although he might long continue the study of Latin. The rule, which the pupils were expected to copy and commit to memory, was written on the blackboard as follows:

RULES FOR USE OF DATIVE

1. Indirect object:
   a. After verbs of *giving*, *telling*, *showing*, etc., in connection with a direct object.
   b. After verbs meaning *favor*, *help*, *injure*, *please*, etc. (Learn whole list.)
   c. After verbs compounded with *ad*, *ante*, *con*, etc. (Learn whole list).
2. Agency (with past passive periphrastic).
3. Purpose or tendency.
4. Possession.
5. With adjectives *similar*, *dissimilar*, etc. (Learn whole list.)

One teacher expressly asked his pupils to translate literally. Since one of the sentences happened to be quite long, the pupil did not get the sense at all. The teacher then showed the weakness of his method to the full, by remarking that the pupils should not worry about getting the sense during the stage of Latin study in which they found themselves. He urged them to pay attention rather to form and let the thought go until they were more advanced. This was of course a mistake. Learning a language is a gradual process, during no stage of which one fundamental part should be sacrificed to any other. Pupils should be impressed with the fact, moreover, that language conveys meaning, and that they do not have the proper translation of any passage until it makes excellent sense in the English that they themselves use. It is quite correct, to be sure, to translate the Latin at first in a literal way but the final step should always be, giving the translation in correct and idiomatic English.

The outline below is a commendable statement of the aim of teaching second-year Latin, expressed by one department head. All pupils even though they do not continue Latin beyond the second year, would be greatly benefited by practice in systematic thinking, by adding to their stock not only of Latin words but also of English derivatives, and by developing facility in English idiom through translation from Latin into English and *vice versa*. The aim is stated as follows:

1. In General: to give practice in systematic thinking.
2. In Particular:
   (a) to develop an appreciation of sentence structure by further drill in grammatical principles.

(b) to increase the pupil's English vocabulary (x) by adding to her stock not only of Latin words but of English derivatives. (y) by teaching the more common Latin suffixes and their equivalents in English.
(c) to develop facility in English idiom through translation from Latin into English and *vice versa*.
(d) to give from original sources some knowledge of the great military movement that led to the extension of Roman civilization among her ancestors in northern Europe.

The work in Latin should be reorganized. Many grammar rules should be postponed until the later stages of the pupil's Latin study. The teacher should give only the fundamental principles of Latin grammar, and let his pupils grow into a knowledge of the language through practice and direct contact. At present, some teachers of foreign languages, especially those of Latin and Greek, are still proceeding on the assumption that extensive knowledge of grammar should be acquired early in the pupil's introduction to the foreign language. This is a mistake, and it is one of the causes for the dislike of the study of Latin.

Such a reorganization of method and subject matter would in no way lower the standard of scholarship. The final result for the pupil that would continue his studies in Latin would be the same, for in the end he would learn his Latin grammar, aggregate vocabulary, and literature as perfectly as he has ever done according to the traditional method.

Greek. Greek was taught in regular classes at only four of the high schools, at Schools L, I, G, and T. School F used to teach it, but the head of the department felt that it was no use trying to keep it up any longer. In addition to the regular classroom teaching, some Greek, however, was being taught after school and during the free hours that the teachers happened to have. This was true of School A, where the head of the department had been giving instruction in Greek during the free periods for some time.

There is not much to be said about the instruction of Greek. It was still being taught in accordance with the traditional method. There was always some pronunciation of the Greek; the pupil translated what he had read, and the teacher asked a few questions on forms and syntax. The ordinary Greek texts, such as White's beginners' book for the first year, the Anabasis for the second, and Homer for the subsequent work, were still in use.

There was one very interesting observation made at School T. The teacher of Greek was using the project method to teach composition.

She had received a letter in Greek from one of her former professors. This was translated by the class into English. Since it was written to both teacher and pupils, it was translated by the class into English; and then the project consisted in writing an answer in Greek to the author of the letter. The pupils were exceedingly interested in the undertaking, and there was no doubt about their deriving a great deal of profit from the exercise. They went at it with zeal and did not seem to care how much time they were devoting to their lesson at any one period. The same type of work, it should be noted, was being done in several foreign-language classes at this school. Other schools should do the same. It would greatly enhance the value of their work.

French and Spanish. The teaching of French and Spanish in the high schools at Philadelphia is still done largely by the grammar-translation method. This was less true of the high schools for girls than of those for boys. At no boys' high school in Philadelphia was it the policy of the foreign-language department to teach pronunciation except by imitation only. Few teachers were skilled in phonetics. It is, however, practically impossible to teach French pronunciation correctly without a knowledge of phonetics. This does not mean, of course, that the pupils are to be taught the theory of phonetics, not even that phonetic transcriptions should be used. The teacher must, however, have scientific knowledge of the position of the tongue, jaws, and lips in the formation of various sounds; for knowledge of these facts will greatly help him guide his pupils toward a more nearly perfect pronunciation.

At all the high schools, especially at those for the boys, grammar as such still played a large part in the teaching of French and Spanish. The teachers aimed at extensive knowledge of grammar and dealt out facts of grammar in unduly large portions. Instead of clearly setting forth the fundamental principles of the language and then teaching their application in a simple, concise, and concrete way, many of them went into details of grammar and stressed one tense or person of the verb, for instance, as much as the other. They clearly confused their pupils with such details, and paved the way for many failures.

Such procedure is quite contrary to the way a language is acquired. Boys and girls have no appreciation of rules in grammar until they have met examples of them in the concrete, on the pages of their reading, or in the sentences of their composition or conversation. Pupils must first meet the accusative or dative, for example, before they appreciate the need of an explanation of its application.

There is no need of teaching pupils all the rules of the grammar of any language during the early stages. It is poor pedagogy, in fact, to burden their minds with rules of grammar for which they have no

application until they have studied the language for four or more years. There might be some excuse for teaching abstract rules of grammar if they had any intrinsic value. Since they do not have such value, the pupils should be taught no more rules during the first year of study than they find application for during that time. The other rules should be deferred until the pupils have had further experience. During the second year, then, no more rules should be taught than the reading and conversation of that year demand. By proceeding in this way the pupils gain a concrete background and acquire the habit of using their reasoning and observation powers for independent development in language work. Language study becomes then more than a matter of memory and recall. It is no more than just to state, that some of the teachers were teaching quite in accordance with the way outlined above, especially at the high schools for girls. It would be to the advantage of the pupils if all the teachers would use the same progressive methods.

Nearly all the teachers resorted to translation. There were but few of them that taught in such a way as to develop in their pupils the ability to understand the foreign language without the medium of English. The oral work in the foreign tongue that was given by many of the teachers even at the high schools for girls, was unfortunately in many cases too general, and aimed at drill and recall in grammar rather than at the understanding of the foreign language without translation. No department really had a definite policy in this respect.

If a teacher does not want his class to translate the assigned work into English, he must ask pointed, searching questions. No phrase of the selection that seems the least bit likely to cause difficulty, or to be a source of ambiguity or misunderstanding, should be passed over. The teacher should not take too much for granted. Asking general questions never answers the purpose. Teaching a foreign language without the medium of English, requires a great deal of vitality and energy on the part of the teacher; otherwise it will not be successful. If properly carried out, the growth and achievement of the pupils make the effort worth while.

Pupils taught in this way may not be able to give French grammar rules as glibly or translate as freely as those who are taught according to the grammar-translation method; but they can do more with the language itself. They have learned it by doing, and know in consequence more French in an all-round way. This is in accordance with modern demands; for, when pupils have once been put on their feet, so to speak, and been given a careful introduction to the foreign language through practice and concrete experience, they continue growing into a fuller knowledge of that language. In time, moreover, they will be able to formulate rules of grammar if need be.

The following two observations, taken merely for illustration, are cases of effective teaching in accordance with progressive methods:

The first teacher in question gave a fine illustration of teaching French by direct contact. Although she did not know enough French to converse fluently under all conditions, she had learned it sufficiently well to conduct her class exercise in the foreign language. With constant preparation for the daily assignment she was able to paraphrase the assigned selections in such a way as to teach her pupils the French language without the medium of English, leading them, at the same time, to paraphrase difficult words and phrases. In consequence of such teaching her pupils had grown into a knowledge of French that was commendable. They had acquired a *feeling* for French and were able to explain what they were doing. They knew the grammar of the French that they were dealing with, and formulated rules of their own with language experience as a background.

The second teacher in question also made use of the direct method, but not without changes and adaptations. She was an excellent modern-language teacher. The following remark that was made to a pupil who hesitated to venture an explanation, was quite in accordance with the way in which teachers should proceed during the early stages of language instruction: "I do not wish of you now a full-fledged rule, I simply want you to tell me what you are doing. In time you will gain sufficient knowledge to be able to tell clearly, scientifically, and definitely, what the various constructions are that you meet." In such a way her pupils worked their way into a knowledge of Spanish that was lasting. It was based on direct contact. She let explanation follow experience and gave the pupils as much grammar as their growth in Spanish entailed.

There was but slight curriculum differentiation of subject matter at any of the high schools. The commercial and mechanic arts pupils were taught from the same books and in the same way as the academic. In fact, at most of the schools they were taught in the same classes. At times there were special sections for the academic pupils, but not often.

The beginning classes were unduly large at all the high schools, especially, however, at the high schools for boys. Classes of 40, 45, 48, and more were not at all uncommon. It is practically impossible for a teacher to do justice to more than 30 pupils in a foreign-language class. Without doubt the large percentage of failures in all the language classes was due, in a measure, to these large classes.

The teachers with slight experience were usually in charge of the beginning classes. The department heads and the teachers with experience and thorough training, on the other hand, taught the advanced and elective classes. Beginners' classes need, however, expert and skilled teachers.

In the following table the first number gives the enrollment of the class, the second the number of failures, and the third the percentage of failure in each case.

TABLE 15.—CLASS ENROLLMENT AND TOTAL FAILURES

French.											
Teacher A.			Teacher B.			Teacher C.			Teacher D.		
Pupils.	Failures.	Per Cent.	Pupils.	Failures.	Per Cent.	Pupils.	Failures.	Per Cent.	Pupils.	Failures.	Per Cent.
42	15	35.7	35	14	40.0	31	14	45.1	38	24	63.2
30	11	36.7	36	29	80.6	41	22	53.7	37	21	57.0
51	10	19.6	35	20	57.1	23	14	60.9	36	12	33.3

Latin.						Spanish.		
Teacher E.			Teacher F.			Teacher G.		
Pupils.	Failures.	Per Cent.	Pupils.	Failures.	Per Cent.	Pupils.	Failures.	Per Cent.
44	27	61.4	35	12	34.3	33	13	39.4
48	26	54.2	32	16	50.0	36	10	27.8
24	18	75.0	31	17	55.0	34	15	44.1
						38	15	39.5

This table should be read: Of the 42 pupils in a French class under Teacher A, 15 or 35.7 failed, etc.

The figures above were collected during the spring of 1920. They were selected from among the data furnished by a high school for boys. The situation as depicted for School I, did not differ greatly from that at the other high schools. The percentage of failure in foreign languages is very high. It is entirely unreasonable that 29 out of 36 pupils should fail in French, 27 out of 44 in Latin, and 15 out of 34 in Spanish.

Tests of Pupil Achievement in Foreign Languages.—Lohr's Latin and Henmon's French Tests. In order to test the achievement of the pupils in foreign languages, a Latin Form Test for Use in High School Classes, by L. L. Lohr, Jr., High School Journal, November and December, 1918, was used for Latin; and the Standardized Vocabulary and Sentence Tests in French by V. A. C. Henmon, Madison, Wisconsin, for French.

The Latin tests require the recognition and location of thirty-five different forms: twenty-one verbs, ten nouns, and four pronouns. In the case of the nouns the declension, gender, number, and case are called for; in the case of the pronouns, the person, gender, number, and case; and in the case of the verbs, the conjugation, voice, mood, tense, person, and number. It is a form test pure and simple, quite in accord-

ance with the common method of teaching Latin. The meaning of the separate words is not required; for it is merely a test of the mechanical side of the language, and appeals only to the memory.

The French tests consist of two parts, the one of a vocabulary of sixty words, the other of twelve sentences. In each case the English equivalent is asked for.

The tests were administered at the high schools by the individual teachers, under the guidance of the surveyor. The pupils were given as much time as was consistent with good work. The results were scored by the several teachers and by four or five assistants in the Department of Public Instruction.

Latin Tests

The tables below give the list of the Latin forms that were submitted to the pupils, together with the percentage of correct answers in each case. There were 743 pupils of one year's training, and 458 of two years' training, that took the test.

First-Year Latin Pupils

The first column gives the Latin forms; the second, the number of forms correctly recognized; and the third, what percentage of the whole these forms are. The results are arranged in the order of their excellence. There were 743 pupils in eleven high schools that took the test.

TABLE 16.—RESULTS OF LATIN FORM TESTS, FIRST-YEAR PUPILS

Forms.	Number.	Per Cent.	Forms.	Number.	Per Cent.
1. bellorum	526	70.79	19. eos	376	50.61
2. hostem	526	70.79	20. quas	361	48.59
3. dat	519	69.85	21. civitate	322	43.34
4. dabat	504	67.83	22. videtur	319	42.93
5. hostium	501	67.43	23. pars	311	41.86
6. est	487	65.55	24. videt	304	40.92
7. sunt	484	65.14	25. darent	297	39.97
8. causam	451	60.70	26. putarent	293	39.43
9. locus	442	59.49	27. re	288	38.76
10. fuit	437	58.82	28. veniunt	278	37.42
11. dixerunt	431	58.01	29. possit	278	37.42
12. potuit	430	57.87	30. dicet	273	36.74
13. dicit	415	55.85	31. vidit	260	34.99
14. locum	406	54.64	32. venerat	248	33.38
15. exercitui	386	51.95	33. hac	236	31.76
16. hic	386	51.95	34. ferat	227	30.55
17. videbat	384	51.68	35. posset	186	25.03
18. dixisset	378	50.87			

The table above shows that only sixty per cent of the pupils recognized the first eight of the thirty-five forms enumerated. It shows, moreover, that only fifty per cent of the pupils placed correctly nineteen of the thirty-five forms; fifty per cent of them, therefore, failed to recognize sixteen of the thirty-five forms.

The median percentage is 50.87.

Second-Year Latin Pupils

In the first column of the table below are given the Latin forms and in the second and third the number and percentage of correct answers. At all the high schools combined there were 458 second-year pupils that took the test.

TABLE 17.—RESULTS OF LATIN FORM TESTS, SECOND-YEAR PUPILS

Forms.	Number.	Per Cent.	Forms.	Number.	Per Cent.
1. bellorum	368	80.35	19. videbat	269	58.73
2. causam	357	77.95	20. dixisset	266	58.08
3. est	337	73.58	21. pars	256	55.89
4. sunt	335	73.14	22. putarent	252	55.02
5. dat	333	72.71	23. exercitui	237	51.31
6. eos	322	70.31	24. darunt	216	47.16
7. hostem	316	68.88	25. venerat	215	46.94
8. hostium	315	68.78	26. re	211	46.07
9. quas	309	67.47	27. videt	201	43.89
10. dabat	306	66.81	28. videtur	201	43.89
11. civitate	305	66.59	29. veniunt	184	40.17
12. locus	303	66.16	30. vidit	181	39.52
13. dixerunt	300	65.50	31. posit	177	38.65
14. potuit	293	63.97	32. ferat	175	38.21
15. locum	291	63.54	33. hac	164	35.81
16. dicit	291	63.54	34. posset	149	32.53
17. hic	283	61.79	35. dicet	140	30.57
18. fuit	273	59.61			

The table shows that only sixty per cent of the pupils recognized seventeen of the thirty-five forms that were included in the test. It shows, moreover, that fifty per cent of the pupils placed correctly twenty-three of the thirty-five forms, only four more than the first-year pupils recognized properly. One-half the class failed to locate twelve of the thirty-five forms altogether. The median percentage is 59.61.

It is worthy of note that the difference between the results of the test of the first-year pupils and those of the second-year is small. In the case of the first-year pupils, 19 different forms were correctly recognized by fifty per cent of the pupils; in the case of the second-year pupils, only four more were correctly placed: *quas, civitate, putarent,* and *pars.* The median percentage for the first-year pupils is 50.87; for the second-year pupils, 59.61.

All the pupils of the second year should have been able to recognize without difficulty forms as elementary as bell*orum,* ca*usam, est, sunt, dat, eos,* and host*em.* But not even eighty out of each hundred did so with more than *bellorum,* and at least five of these eight forms had been before the pupils since the first few weeks of their Latin study. In two years over one-fourth of the class did not learn to characterize completely *est, sunt,* and *dat.* Each one of the forms mentioned is clear and distinct; their endings are common and definite. Not so many should have failed to recognize them. It cannot have been because the recognition of forms had not been emphasized in the teaching; for drills on forms and constructions constitute the work of the first two years almost exclusively. During the second year, no better showing than the table

reveals was made, in spite of the fact that so many of the first-year pupils had dropped out.

The energy of the Latin teachers should be spent upon work that will leave a larger precipitate. If the pupils are to spend their time with profit, the reorganization of Latin teaching is imperative. The bare, dry forms, evidently, make no appeal to them and leave no lasting impression upon their minds. Without concrete background they fail to stay as permanent possession.

First-Year Latin Test by Schools. In the table below are given in detail the results of the first-year Latin test at the several schools. The last row, which shows the average of each high school, affords an opportunity of comparison. The average score for all the schools is 17.43. The average score for each school is as follows: School L, 13.3; School I, 13.8; School C, 15.3; School A, 16.3; School G, 17.1; School B, 18.5; School F, 19.6; School T, 20.9; School D, 21.3; School E, 23.0; School H, 25.6.

The following figures show the results of a test given to first-year pupils at four different high schools:

High School.	Pupils.	Score.
White Plains	76	17.4
DeWitt Clinton	142	23.3
Brooklyn Boys	216	25.0
Horace Mann Girls	28	30.4

TABLE 18.—RESULTS OF FIRST-YEAR LATIN TESTS BY SCHOOLS

School	L	C	F	T	B	I	H	A	G	D	E	Total.
Total Pupils	208	64	69	70	33	74	40	27	59	65	34	743
1. bellorum	123	50	53	55	22	46	36	19	46	44	32	526
2. hostem	131	45	49	59	25	45	38	18	40	46	30	526
3. dat	134	47	43	55	19	40	36	25	47	43	30	519
4. dabat	119	45	44	55	23	41	38	23	45	40	31	504
5. hostium	118	43	48	54	24	41	39	20	38	46	30	501
6. est	106	38	59	54	20	39	36	21	35	50	29	487
7. sunt	104	40	55	51	21	37	37	21	37	50	31	484
8. causam	91	24	51	54	24	39	33	16	39	57	23	451
9. locus	104	40	48	49	21	42	32	17	28	35	26	442
10. fuit	80	36	69	42	21	36	35	7	32	42	27	437
11. dixerunt	77	37	48	48	24	34	34	19	42	39	29	431
12. potuit	98	27	50	37	16	44	35	13	47	43	20	430
13. dicit	78	38	41	47	25	31	28	24	36	43	24	415
14. locum	96	32	41	46	18	37	33	13	28	36	26	406
15. hic	98	26	44	32	15	35	29	2	43	37	25	386
16. exercitui	108	34	28	51	23	28	23	1	32	28	30	386
17. videbat	73	28	39	52	16	20	31	24	26	56	19	384
18. dixisset	76	28	39	38	20	30	32	13	39	42	21	378
19. eos	85	23	46	33	16	31	31	9	39	41	22	376
20. quas	81	32	42	49	12	32	29	1	35	22	26	361
21. civitate	67	19	38	29	21	35	16	5	29	51	12	322
22. videtur	48	20	30	47	16	18	29	23	21	49	18	319
23. pars	75	17	26	40	21	23	20	5	19	46	19	311
24. videt	56	20	26	43	14	12	20	23	22	53	15	304
25. darent	63	22	23	39	13	17	32	10	32	25	21	297
26. putarent	57	17	26	33	17	16	30	6	30	38	23	293
27. re	63	15	36	47	14	17	22	0	28	28	18	288
28. posset	68	15	34	16	12	23	32	6	22	34	16	278
29. veniunt	41	23	22	39	10	25	23	11	31	36	17	278
30. dicet	47	26	27	40	13	18	17	15	20	28	22	273
31. vidit	38	18	28	40	11	14	24	16	23	34	14	260
32. venerat	18	17	25	39	15	27	19	10	23	38	17	248
33. hac	62	13	25	21	10	20	23	1	17	29	15	236
34. ferat	53	13	18	17	9	16	22	0	29	29	21	227
35. posset	39	10	22	14	10	11	29	3	19	25	4	186
Average Score	13.3	15.3	19.6	20.9	18.5	13.8	25.6	16.3	17.1	21.3	23.0	17.43

In the table below are given in detail the results of the second-year Latin test at the several schools. The last row makes a comparison of school with school possible. The average score for all the schools is 19.9. For the individual school the average scores in the order of their excellence are as follows: School I, 13.3; School L, 16.5; School G, 17.2; School B, 17.4; School C, 18.5; School A, 20.6; School F, 21.7; School H, 22.3; School E, 25.6; School T, 26.1; and School D, 28.4.

TABLE 19.—RESULTS OF SECOND-YEAR LATIN TESTS BY SCHOOLS

School	L	C	F	T	B	I	H	A	G	D	E	Total.
Total Pupils	108	35	45	56	12	56	30	20	38	40	14	458
1. bellorum	87	26	39	50	10	33	29	16	29	27	12	368
2. causam	69	28	37	53	9	40	27	17	26	38	13	357
3. est	91	28	35	50	9	10	16	16	31	39	12	337
4. sunt	87	31	35	49	8	12	15	16	30	39	13	335
5. dat	79	21	41	47	9	17	26	14	26	39	14	333
6. eos	60	25	38	51	8	34	18	17	22	36	13	322
7. hostem	64	25	33	48	8	32	26	17	21	30	12	316
8. hostium	54	23	35	46	8	35	29	18	21	33	13	315
9. quas	55	22	33	53	8	29	21	16	22	36	14	309
10. dabat	64	21	40	48	8	15	22	14	23	38	13	306
11. civitate	59	25	31	48	8	35	21	16	19	33	10	305
12. locus	68	20	34	48	7	37	20	16	17	27	9	303
13. dixerunt	50	23	29	52	7	33	24	11	21	36	14	300
14. potuit	52	20	25	47	8	25	24	15	30	36	11	293
15. dicit	57	10	35	44	5	22	24	13	23	35	14	291
16. locum	67	23	30	44	6	34	17	16	19	27	8	291
17. hic	65	24	29	40	8	27	18	5	21	33	13	283
18. fuit	54	25	27	41	7	14	16	19	24	34	12	273
19. videbat	49	20	25	45	8	25	20	16	19	34	8	269
20. dixisset	44	17	25	46	6	29	20	11	21	37	10	266
21. pars	54	17	27	44	6	23	22	12	12	30	9	256
22. putarent	39	12	27	54	4	18	24	7	19	36	12	252
23. exercitui	61	13	21	43	3	23	16	3	16	26	12	237
24. darent	30	10	30	39	2	13	21	6	16	36	13	216
25. venerat	34	9	26	42	5	17	18	9	16	30	9	215
26. re	57	12	17	42	3	19	18	8	8	18	9	211
27. videt	32	18	21	35	4	14	14	13	16	30	4	201
28. videtur	31	16	24	37	6	10	13	13	14	33	4	201
29. veniunt	31	4	22	43	4	16	13	8	8	27	8	184
30. vidit	24	15	17	30	4	20	18	9	9	30	5	181
31. possit	11	15	25	28	4	14	13	10	16	34	7	177
32. ferat	33	4	21	38	3	11	12	5	10	34	4	175
33. hac	35	18	11	31	3	15	12	1	9	21	8	164
34. posset	20	10	18	29	3	9	8	4	16	26	6	149
35. dicet	16	7	16	32	0	9	14	5	4	27	10	140
Average Score	16.5	18.5	21.7	26.1	17.4	13.3	22.3	20.6	17.2	28.4	25.6	19.9

The summary below makes a comparison between the results of the first-year test and those of the second-year possible. It is interesting to note the slight increase in the average scores of the schools. In fact, at two of the schools the second-year pupils did worse than those of the first year.

TABLE 20.—COMPARISON OF FIRST AND SECOND-YEAR TESTS

School	L	I	H	G	F	C	T	E	D	A	B	Total.
First Year	13.3	13.8	25.6	17.1	19.6	15.3	20.9	23.0	21.3	16.3	18.5	17.4
Second Year	16.5	13.3	23.3	17.2	21.7	18.5	26.1	25.6	28.4	20.6	17.4	19.9

French Tests. The French tests embraced a French vocabulary test of sixty common words and a translation test that consisted of twelve sentences. For each item the English equivalent was asked.

The tests were administered by the individual teachers under the guidance of the surveyor. The pupils were allowed as much time as was consistent with good work, and any reasonable translation was accepted as correct. The results were scored in the same way as the results in Latin.

The French tests, like those in Latin, appeal to the memory only. They do not test the power and accuracy of influence based on context and connection. Nor do they allow the imagination to have its sway. In each case the word or sentence, in many cases idiomatic, had to be known in its isolated position. This is quite a difficult task even in English.

The separate words of the French vocabulary were weighted in accordance with the frequency of correct answers that were obtained while the test was being prepared. The word that was translated correctly most frequently was given less score value than the words that were unknown to more pupils.

The following is the list of the French words, together with the score value of each:

FRENCH VOCABULARY LIST

1.1 aujourd'hui	2.4 apporter	2.9 gauche	3.5 plaire
1.7 chose	2.4 dormir	2.9 mieux	3.6 ainsi
1.7 nouveau	2.4 vie	3.0 rester	3.6 rentrer
1.9 porter	2.4 lire	3.0 rire	3.7 oreille
1.9 hiver	2.5 devant	3.1 chacun	3.8 chez
2.0 onze	2.5 lait	3.1 seulement	3.8 dont
2.0 venir	2.5 vache	3.1 conduire	4.0 lorsque
2.1 vieux	2.6 deja	3.2 quelque	4.0 soulier
2.1 mille	2.6 quitter	3.2 rendre	4.2 paraitre
2.2 vert	2.7 bras	3.2 sembler	4.2 dejeuner
2.2 vouloir	2.7 on	3.3 gagner	4.5 aussitot
2.3 annee	2.7 ouvert	3.3 ou	4.5 moindre
2.3 haut	2.8 jeter	3.4 cependant	4.8 autant
2.3 semaine	2.9 mois	3.4 plein	5.2 lieu
2.4 meilleur	2.9 oublier	3.5 ordonner	5.4 valoir
		Total	179.6

The average number of correct translations that was established by Henmon as a standard is 32.4 for the first-year pupils and 47.6 for the second-year. The score value of the one is 87.1 and of the other 132.8.

The sentences were weighted in the same way as the words of the vocabulary. The following list gives the separate sentences and score value of each:

SENTENCE TRANSLATION TEST

1.1—La jeune fille a les yeux bleus.
1.5—La mere aime l'enfant.
1.9—Je n'ai parlé a personne.
2.3—On trouve que la vie est chère dans les grandes villes.
2.7—J'ai deja ete le voir.
3.1—C'est pourquoi nous ne sommes pas alles sur l'eau.
3.5—J'irai le trouver si vous n'y alles vous-meme.
3.9—Il a de son cote quelque chose a dire, il me semble.
4.3—Qui pourra le sauver si ce n'est ses amis.
4.7—Il l'a fait sans qu'on le lui ait dit.
5.1—Faites semblant d'etre content afin que les autres n'aient pas peur.
5.9—Il viendra pourvu qu'il ne fasse pas froid.

40.0

The standard average number of correct translations, established by Henmon, is 5.4 for the first-year pupils and 8.2 for the second year. The standard score value of the one is 14.0 and of the other 23.6.

First-Year French Tests. There were 1115 first-year pupils that took the tests. According to the table below they did not do at all well. In the case of the Vocabulary Test, only three of the eleven did better than the standard that was determined on the basis of several thousand tests in other cities. School H made a score of 97.0 points, compared with the standard 87.1; School C made a score of 94.5 points, and School F, one of 92.9 points. The remaining schools fell below the standard. School B, made only 51.5 points, and School I, 55.4. The

TABLE 21.—SUMMARY OF MEDIANS OF FIRST-YEAR FRENCH TEST

School.	Number of Pupils Scored.	Vocabulary Test.		Sentence Test.	
		Number of Correct Answers.	Score Values of Correct Answers.	Number of Correct Answers.	Score Values of Correct Answers.
L	118	25.0	65.9	4.0	7.9
I	132	22.4	55.4	3.2	4.1
H	83	24.0	64.0	3.0	6.7
G	132	30.3	84.5	4.3	8.9
F	47	34.1	92.9	3.5	6.2
C	92	34.5	94.5	3.9	8.7
T	128	34.0	97.0	4.5	9.2
E	106	25.0	67.1	4.0	8.2
D	151	28.0	74.5	2.0	3.0
A	75	31.0	84.7	3.0	5.0
B	51	20.0	51.5	2.0	4.5
Average	1,115	28.6	75.6	3.4	6.6
Standard	.....	32.4	87.1	5.4	14.0

average score for the city is 75.6 points, compared with the standard 87.1.

In the case of the Sentence Translation Tests, the showing was even worse. Not a single school attained the standard average of 14.0 points. The two highest scores were made by School T with 9.2 points, and by School G with 8.9 points; the two lowest, by School D with 3.0 points, and by School I with 4.1.

In Table 22 the median score in each case is given. There were sixty words in the vocabulary and twelve sentences in the sentence translation test. The score values were determined according to the list of values given above.

Second-Year French Tests. The same tests were administered to 671 second-year pupils.

In the case of the Vocabulary Test several of the schools rose above the standard average of 132.8 points. School F stood the highest with 157.9 points; then came in order School G with 136.9, School L with 136.6, and School A with 133.0 points. The lowest two scores were made at School T with 110.0 and School I with 98.4 points. The average for the city is 127.5 points, compared with the standard 132.8.

In the case of the Sentence Translation Test, three of the Philadelphia high schools made better scores than the standard. School G was the best with 35.6 points, then came in order School L with 26.1 and School B with 25.5 points. The lowest two scores were made by School T with 9.4 points and School H with 12.6. The standard average is 23.6 points, the average for the city, only 19.8.

In the table below the median score in each case is given. There were sixty words in the vocabulary and twelve sentences in the sentence translation test. The score values were determined according to the list of values given above.

TABLE 22.—SUMMARY OF MEDIANS OF SECOND-YEAR FRENCH TESTS

School.	Number of Pupils Scored.	Vocabulary Test.		Sentence Test.	
		Number of Correct Answers.	Score Values of Correct Answers.	Number of Correct Answers.	Score Value of Correct Answers.
L	76	48.0	136.6	8.5	26.1
I	81	34.3	98.4	5.1	13.1
H	35	44.0	120.8	5.0	12.6
G	66	47.5	136.9	11.0	35.6
F	74	54.3	157.9	7.8	21.7
C	72	44.9	123.6	6.5	16.8
T	23	39.5	110.0	4.5	9.4
E	66	44.0	123.0	8.0	21.2
D	80	47.0	132.8	6.5	17.8
A	68	47.0	133.0	7.0	17.9
B	30	47.5	130.0	8.5	25.5
Average	671	46.4	127.5	7.3	19.8
Standard	...	47.6	132.8	8.2	23.6

Judged by the results of the tests the work in French was at most of the schools below the standard established by tests given to many pupils throughout the country during the preparation of the Henmon tests. The question naturally arises: What caused the poor showing? Are the teachers poorly prepared? In training and experience they compare favorably with teachers of French in general. Are the pupils in the French classes poor material to work upon? The make-up of the pupil body in the larger American cities is very much the same, and they receive about the same type of preliminary training. Is the teachers' method at fault? The method of presentation is quite in accordance with the old-line grammar-translation method, and the tests asked for the type of knowledge that is acquired in accordance with such teaching. Are the sections in the beginning work too large? According to reports obtained from teachers, the first semester sections ran as high in enrollment as the following: French 40, 41, 42, 43, 43, 44, 44, 45, 48, 50, 50, 52, 59; Latin 42, 43, 43, 44, 45, 45, 51, 53, 56; Spanish 40, 42, 42, 43, 43, 45, 47, 47, 49, 49, 51, 51, 52, 54, 59. It should be remarked, furthermore, that these sections are usually in charge of beginning teachers. Is the poor showing due to the fact that nearly all the high school pupils are required to take foreign languages? At all but a few of the high schools, at least two years of some language are required even of the commercial and mechanic arts pupils. Would efficient supervision produce better results? Other progressive schools place their trust in expert supervision. Unification and correlation in the teaching are the result. The teachers are helped to a higher standard of efficiency in their work.

RECOMMENDATIONS

1. Since there is no longer a substantial argument of general transfer of mental training in favor of the study of foreign languages, they should not be required of all high-school pupils. This should apply especially to the commercial and mechanic arts pupils.

2. Periods of probation should be instituted, to discover those who may not pursue the study of foreign languages with profit. In this way many pupils who are today meeting nothing but failure might be diverted to courses that would accrue to their benefit and advantage.

3. In order to meet the needs of the individual pupils as nearly as possible, it is recommended that the courses in modern foreign languages be differentiated for the several curricula. The pupils of the commercial curriculum, for instance, should be offered a different type of work from the college-preparatory pupils.

4. Since pupils that study a foreign language require a great deal of individual attention during the early stages, at least, it is recommended

that the beginning classes be made smaller than they are today. Few if any teachers of foreign languages can effectually teach a class of more than twenty-five or thirty pupils. The results of the tests show that only too clearly. The beginning classes were unreasonably large. This should be changed. The individual pupils would receive more attention, and failures would in consequence to a marked degree be avoided.

5. Since the first steps in foreign languages are so important and critical, it is recommended that the pupils of the beginning classes be put in charge of experienced and expert teachers. It is a mistake to entrust them to as many inexperienced teachers as is being done in Philadelphia at the present time. This is, without any doubt, one of the chief causes of the great number of failures and of the poor showing of the pupils in the tests.

6. Greek, like other subjects with small pupil enrollment, should be offered only when it would be economical to do so. Several schools should, however, combine when such combination would produce this necessary enrollment.

7. For the sake of the unification and coördination of the foreign-language teaching, it is highly recommended that the department heads be afforded more time to supervise the work of the teachers under them. Foreign-language teachers are often inexperienced, and differ greatly in method of presentation. With more time for supervision the department head would be able to bring about the unity of effort which is so essential to efficient teaching.

8. In order to provide a uniform excellence of organization and of method in the teaching of foreign languages which will insure to every high-school pupil an adequate and similar opportunity, it is finally recommended that a foreign-language director, together with such supervisors as may be necessary, be attached to the superintendent's office. The specific duties of this director would be to arrange group meetings of teachers, prepare syllabi, prescribe methods of instruction, conduct tests, regulate examinations, and recommend and grade teachers.

CHAPTER VI

GEOGRAPHY

How Data were Obtained. The facts forming the basis of this report were obtained by observation of classroom work and by study of equipment available for use in teaching this subject and of coöperating agencies.

The Educational Value of Geography. Geography shows the child how various environments influence the occupations, the modes of life, and the mental and physical conditions of peoples the world over, and how the consequent difference in production brings about an exchange of commodities, the interrelations of peoples and individuals, the dependence of one person upon another, and the interdependence of all. It gives culture by acquainting the pupil with the ideals and institutions of other people. Thus, it tends to produce breadth of mind and liberality of thought.

The teaching of geography develops a spirit of investigation and gives an impetus to seek the truth. It is a valuable aid to other subjects, especially language work and reading.

Geography is the gateway to the physical sciences, the key to history and social science, and the basis of commerce. It gives the pupil a fund of information that is of daily value. It makes him feel at home in the world in which he lives; helps him to see that true citizenship is partnership in every good undertaking; and goes a long way towards placing him in proper relationship with nature and man. It tends to correct misunderstandings, to remove prejudices, and to promote peace and civilization.

Favorable Factors in Philadelphia. In every locality the status of geography is influenced, more or less, by certain local conditions, persons, and events. Philadelphia is no exception to this rule. Here, many favorable factors have tended to stimulate intelligent interest and to sustain continued effort in the better teaching of this subject.

Among these factors may be mentioned: the location of the city itself—its broad outlook, varied interests, great industries, and world-wide business connections; the Philadelphia Commercial Museum with its far-reaching activities, of which more will be said later; the Philadelphia Normal School, whose department of geography deserves great credit judging from the character of the work done by its graduates; the University of Pennsylvania, strong in its scientific, geographic, and educational influences; Temple University; the Phila-

delphia Chamber of Commerce; the Geographical Society of Philadelphia, having a large number of Philadelphia teachers in its membership, at whose disposal is a considerable collection of geographical magazines and to whom is presented regularly interesting and valuable lectures; and the American Academy of Political and Social Science with its frequent discussions on present world problems and its valuable "Annals."

Special Teachers of Geography. Geography is a departmental subject in many Philadelphia schools, particularly in the seventh and eighth grades. This system works well, at present, and should accomplish even better results in the future. It permits the teacher to give all of her time to the one subject and, therefore, tends to raise her standards and to increase her efficiency. She becomes better acquainted with geographical equipment and more skillful in its use. She gains a deeper and more meaningful insight into the principles and aims of geography. Her own interest and preparation in the subject are extended and strengthened. Special teachers of geography should be as well prepared in their chosen field as the special teachers of music, history, and drawing.

There is an educational psychology of each school subject, geography among the rest, that should become a part of the teacher's professional equipment. The departmental plan makes it possible for a teacher to achieve the development of the technique in *one subject*, whereas it would be impossible to acquire this for *all subjects* in the elementary curriculum.

RECOMMENDATIONS

At local institutions additional opportunities should be offered to teachers in service to increase their efficiency in teaching geography.

These teachers should be encouraged to study at institutions where the types of geographical field work not found in the vicinity of Philadelphia are available and the broadening effect of *extensive, systematic* travel be recognized as of equal value with the usual courses of geographical instruction.

Coöperating Agencies. 1. **The Pedagogical Library.** This institution, which is a part of the Philadelphia Public School System, has a valuable collection of geographical and other reference books and magazines dealing both with subject matter and methods, which are in constant use by the teachers.

Its 1200 slides are arranged in sets and are in constant circulation among the schools.

A lantern slide committee is now at work on these slides selecting and arranging, in accordance with the new course of study, sets of

slides for geography in Grades 3, 4, 5A, 5B, 6A and 6B. The committee is not limiting itself to the slides already on hand, but will add much new material as it seems desirable. Its final report giving titles of slides arranged in sets by grades and topics in accordance with the new course of study in geography, and containing helpful information on each set, will make a very practical handbook for the Philadelphia teachers and should greatly increase the usefulness of the Pedagogical Library collection.

This library has also a small collection of films which are used by the schools.

2. **The Philadelphia Commercial Museum.** In addition to the moving picture service mentioned on page 198, the Museum's educational activities * in Philadelphia include the following:

1. School collections, or miniature museums, which are given free to schools throughout Pennsylvania. More than two hundred and fifty have been distributed in Philadelphia, so that those schools are rather generally supplied with these excellent collections of pictures and specimens illustrating the world's great industries and products.

2. Special lectures to teachers and others are given in the auditorium of the Museum, usually on Saturday afternoons.

3. Daily lectures to visiting classes of children on subjects chosen by the teachers. These lectures are adapted to the pupils in content and language, and are illustrated with accurately colored slides and many educational motion pictures. They do not replace school work, but supplement it. At present the Museum lecture room can accommodate each geography pupil in Philadelphia but once a year.

4. Study of the exhibits under the guidance of competent museum assistants. This study follows immediately after each lecture. The classes are divided into small groups, the children are brought face to face with life-like exhibits of the people, products, and industries of the countries referred to in the lecture. Experienced guides direct their observations and studies, and, by asking and answering questions, help the pupils to a clearer understanding.

The strength of this work lies in the combination of lecture, lantern-slide and motion-picture illustration, and close contact with actual specimens and impressive exhibits. This threefold study makes a lasting impression on the pupils; the information imparted is up-to-date

* See Bulletin of the U. S. Department of Education. "Education and the Philadelphia Commercial Museum," by Charles R. Toothaker.

and reliable; and the deep interest aroused in the average child and teacher should prove a healthy stimulus towards better work in geography.

Unfortunately there is not enough money to hire a sufficient number of guides to take care of even half of the pupils who visit the Museum. On a day during the making of this survey four hundred seventy-six children came to the lecture, but there were not enough guides to take care of more than one hundred. Three hundred seventy-six pupils and their teachers were unable to obtain this service.

RECOMMENDATIONS

Since the lectures to visiting classes and the guide service given at the Museum is of such great value, this work should be extended so as to correlate more closely with the new course of study and to make this combined service more generally available.

Since the results would amply justify the expense, and since equivalent results could not be secured in any other way at so low a cost, the Board of Education of Philadelphia should make an annual appropriation for this purpose.

3. The Philadelphia Chamber of Commerce. Through the efforts of the Educational Committee of this organization, fifteen publications presenting phases of the industrial and commercial life of Philadelphia were prepared and distributed to teachers in all the public schools. Additional copies of some of these pamphlets are still available. Although they were intended originally to be used chiefly in connection with the Civics Course of Study for Grade VI, they are full of geographical material.

RECOMMENDATION

The Chamber of Commerce and the school authorities should ascertain and establish additional means of coöperation.

4. The University of Pennsylvania Museum. There is a vast fund of material illustrating primitive and ancient peoples.

RECOMMENDATION

While in the past this great institution has been used by some teachers, a more definite coöperation should be set up between the museum and the school authorities.

Time Allotted to Geography. The time allotted to geography in Philadelphia is considerably less than in other cities, and is particularly inadequate in the upper grades.

About six years ago, Professor F. Bobbit published in the Cleveland *Education Survey* a table showing the time given to geography in Cleveland and in the average American city.* This table, with Philadelphia added for comparison, is reproduced below.

TIME ALLOTMENT FOR GEOGRAPHY

Grade.	Hours per Year.			Per Cent of Grade Time.		
	Average Fifty Cities.	Philadelphia.	Cleveland.	Average Fifty Cities.	Philadelphia.	Cleveland.
1	16	13†	0	1.8	1.3	0.0
2	7	13†	0	0.8	1.3	0.0
3	50	70†	28	5.4	7.0	3.2
4	83	70	101	8.5	7.0	11.4
5	102	70	125	11.2	7.0	14.3
6	107	70	125	11.0	7.0	14.3
7	98	46	57	9.9	4.6	6.4
8	76	23	57	7.6	2.3	6.4
Total	539	375	493	7.1	4.7	7.2

It will be seen from the table that the total number of hours given to geography in Philadelphia is 375 as compared with 493 in Cleveland and 539 in the average city. But this comparison becomes yet more unfavorable for Philadelphia when the distribution of geography over the grades is considered. Only in the first, second, and third grades, where Nature Study is counted as geography, does Philadelphia seem to hold her own. In the fourth, fifth, and sixth grades she falls far behind. In the seventh and eighth grades, where the work is vital to a well-rounded curriculum, Philadelphia gives less than one-half of the time devoted to this subject in the average American city, and in the eighth grade less than one-third of the time allotment.

If the time given to Nature Study is deducted, there remain only 325 hours for geography from its beginning in the third grade to its ending in the eighth. This is only about half of the time given to geography in Boston, and only about 60 per cent of the average of cities in general.

RECOMMENDATION

Since the time given to geography in Philadelphia is less than the time given to the subject in the average American city, a careful study of the present time allotment should be made with a view to a closer conformity with accepted standards.

The New Course of Study. Philadelphia is evolving a new course of study in geography. The first part of this course, covering grades

* The average of fifty American cities.
† Including Nature Study

one to six, inclusive, was completed and introduced into the schools during the current year. The second part of the course, covering grades seven and eight, was not available at the time of this survey, but was expected to be ready at the beginning of the new school year.*

The new course of study recognizes geography as "one of the great means by which we come to understand human life"; holds that the basic or central idea of geography is "relationship between the earth on which we live and the life which is lived upon the earth"; and attempts to make the discovery of such relationships "the dominant idea of the course."

The work by grades is carefully planned, and helpfully outlined. The outline for each grade is accompanied by general suggestions as to method; and these suggestions are eminently practical and will do much towards improving the work in geography.

There are, however, no suggestions concerning sources of geographical information.

Grades 1, 2, and 3. Nature Study is very properly considered an "essential preliminary to geography," and is given twenty minutes per week in the first and second grades, and thirty-five minutes per week in the third grade.

Geography begins in the third grade and is allotted two thirty-five-minute periods per week. The pupil makes his first approach to world geography by tracing the route of the founders of Philadelphia, or by inquiring into whence and how some of the articles he uses came into his possession. The major part of the work, however, is home geography. In this work excursions, specimens, lantern slides, motion pictures, oral descriptions, and supplementary reading are used. "The fullest possible use should be made of the pupil's own observations and experiences."

Such work is a great stimulus to the children since it is a study of their own environment, and, therefore, directly concerned in their own lives and interests. It creates an eager and wholesome desire to learn; encourages observation and investigation; fills the children with enthusiasm and makes them eager to contribute their own ideas to the knowledge of the class; offers an easy and natural transition from nature study to geography; and, at the same time, gives the children a good preparation for the more formal work of the fourth grade.

Excellent suggestions for third grade teachers, helpful comments on the use of the lantern and motion pictures, and practical outlines for excursions to attractive and instructive places in or near the city, are given in the course of study.

* The course for grades 7 and 8 has since been introduced into the schools. Brief reference lists for teachers are given.

Grades 4, 5, and 6. In each of the fourth, fifth, and sixth grades geography is allotted three thirty-five-minute periods per week.

The first half of the fourth grade is devoted to a study of Philadelphia and its industries; the second half to the State of Pennsylvania, the Appalachian Mountains, and the Middle Atlantic States. The purpose of the work in this grade is to give the child some insight into those geographical influences and relations which are of importance in his life, and to acquaint him with the elementary essentials of the geography in his city, state, and group of states. It is regrettable that the same subject "Philadelphia Industries," should appear both in the Third Grade and Fourth Grade geography courses and also in the Civics Course for the Sixth Grade.

In the fifth grade the first half of the year is given to the United States, and the second half to the remainder of North America and to all of South America.

In the sixth grade the first half of the year is devoted to Europe, and the second half to Asia, Africa, and Oceanica.

In both fifth and sixth grades the emphasis is placed on "influence of physical controls, such as climate and topography, upon human life and industry," and "cause and effect are brought forward with frequency." The aim is to give the pupil the essentials of the geography of the regions studied; to develop his understanding, reasoning power and judgment; and to broaden and deepen his interest in the subject.

Grades 7 and 8. In the seventh grade, two thirty-five-minute periods per week are to be devoted to a study of "The Industrial United States,"* and in the eighth grade, one such period a week to a study of "Current Events Geography."†

The weakness of this plan lies in the fact that it assigns to geography less than half of the time usually given the subject in these grades. Hence there is not sufficient opportunity to do the work thoroughly. However, the child makes a study of his own country and also of world geography and relations, at the very stage in his school life when it should accomplish the most good from the standpoint of a practical education—practical, not only in the commercial sense of preparation for the problems of economic life, but also in the larger sense of the development of character and right citizenship.

Many children complete their school work in the seventh and eighth grades; and relatively few of those who reach the high school or university have an opportunity for more work in geography. Whatever may be the fundamental purpose of school geography, it must, if ever,

* Authentic title, *Trade Relations of the United States.*
† Authentic title, *Current Geography.*

be attained in grades three to eight. The geography in the Philadelphia Junior High School is considered in the report on Junior High Schools.

RECOMMENDATIONS

A careful study should be made of the geography and civics courses with a view to avoiding any duplication of effort in the teaching of these two subjects.

Lists of the best references on methods of teaching and some good source material on the subject matter outlined in the course of study should be compiled and made available for all teachers of Grades 1 to 6.*

The Superintendent's office should distribute suggestive lesson plans prepared by a committee of experienced teachers.

Geographical Equipment. The schools of Philadelphia are, on the whole, fairly well equipped for the teaching of geography. The supply of textbooks and of supplementary readers seems adequate in several places, but old, out-of-date editions are still in use in some classrooms. The same is true of maps, including desk and blackboard outline maps, and commercial, political, and physical wall maps. Few globes are to be found in actual use in the school rooms.

A few schools are supplied with stereoscopes and stereoscopic views; and several schools use quite extensively lantern slides borrowed from the Pedagogical Library. The lantern is either portable so it can be used in different rooms; or else a special room or lecture hall is provided for stereopticon lectures and, in some schools, motion pictures. This work is well organized and productive of good results.

A very important thing for the future of education is the encouragement of the *wise* use of moving picture films. Within ten or fifteen years, a very large percentage of the schools will be using films in the teaching of geography, nature study, and various other subjects. Films have a usefulness which may well be compared with that of books, maps, models, and specimens.

However, it is useless for a school to install a moving picture machine unless the teachers can get the right films. The Philadelphia Commercial Museum has a considerable collection of films which are now being loaned free to any Pennsylvania schools that can use them, and the Pedagogical Library has a small collection which are available for Philadelphia schools. The only practical way for a city like Philadelphia to get these films is to establish and maintain a film library.

The Teaching Process. Good methods of teaching geography were found in the majority of the classes observed. The question and answer method, in its best form, was in frequent use by the teachers. The

* See Addendum.

questions called for thought work rather than memory work. They drew out information and helped in testing and organizing it; they guided the children in discovering and emphasizing important relations; and they led the pupils, step by step, in the solution of new problems by means of knowledge already gained. As a unit of work was developed, the pupils made their own outlines, thus reversing the old topical method which often followed stereotyped outline forms. Class periods were given to discussion rather than to recitation. The children were called upon to observe, think, reason, and judge.

Excellent map work was frequently seen. Wall and desk outline maps were generously used for studies indicating the distribution of commodities and other geographical facts, and for showing important relations, for example, between winds, climates, products, and trade and transportation routes. Wall maps and textbook maps were quite freely and often skillfully used in both preparation and recitation periods. For example, in a fifth grade lesson on the Great Lakes, the location of Duluth was noted by each pupil: (1) on the map in his textbook, (2) on a wall map of the United States, (3) on a blackboard outline map of the Great Lakes region, and (4) on his own outline map of the United States. This commendable map habit was found on several occasions.

In a few schools too little attention was given to supplementary reading, and there were even instances where neither teacher nor pupils seemed ever to have looked beyond the textbook. On the other hand, there were grades in which the textbook served merely as a guide around which to organize the rich fund of information gained from outside sources, such as supplementary readers and magazines.

A particularly interesting example of the latter method was observed in a 6A grade. The assignment, "Why sugar is imported into the United States," had been made to a class of about forty pupils. The children divided the question into four topics, organized themselves into four committees, elected their leaders, subdivided the topics and made assignments, and went to work, every member responsible for a definite contribution. On the day of the lesson, each leader opened his topic with an introductory talk, and then called on his staff to continue the discussion or to illustrate it with pictures, specimens, maps, newspaper and magazine clippings, and with data placed on the blackboard or on charts or maps—all the more valuable because planned and prepared by the children themselves. It is very essential, however, that pupils remaining in their seats share constantly in the classroom activities during the presentation of these lessons.

This kind of work requires a strong teacher—one well acquainted with her subject; but, when successfully done, it yields rich returns in interest, knowledge, and good habits of work. It may be desirable, also,

on some assignments, to collect such group work into the form of a "book." The preparation of the "book" involves other worth while activities and tends to correct mistakes in language and in content that may have passed unnoticed in the oral presentation. Principles of art education are also applied in making these books.

RECOMMENDATIONS

Old and out-of-date editions of textbooks and supplementary readers, desk and wall maps, commercial, political and physical, should be promptly replaced; and also blackboard outline maps should be made more generally available.

More globes should be supplied and the more frequent use of globes should be made to avoid the misconceptions that frequently arise from the constant use of the flat maps.

Every school building should be equipped to use lantern slides effectively.

A study should be made of the available supply of films, and steps should be taken to increase this supply, and a clearing house should be established for their economical distribution.

RECAPITULATION OF RECOMMENDATIONS

The degree to which geography work in the elementary schools of Philadelphia can be made to approach its maximum possibilities, depends upon a number of factors, the most important of which have been covered in the recommendations already made. These recommendations may thus be summarized:

Since the time given to geography in Philadelphia is less than the time given to this subject in the average American city, a careful study of the present time allotment should be made with a view to a closer conformity with accepted standards.

The departmental teaching of geography should be extended.

Geography teachers in service should increase their efficiency by taking suitable courses at local and other institutions and by systematic travel.

The present relations of the schools with the coöperating agencies such as the Pedagogical Library, Philadelphia Commercial Museum, University of Pennsylvania Museum, Philadelphia Chamber of Commerce, should be extended and strengthened.

The present geography section of the Philadelphia Teachers' Association should extend its work to include both the study of geographical information and also research along the line of methods of teaching geography.

A director of instruction in geography should be appointed, since it is generally recognized in modern American school administration that, in a large school system, directors of individual subjects are necessities. Such a director should be familiar with the detailed content of geography and should be definitely trained in the various methods of presenting it. Such a director would coördinate the entire work in this complex and ever-changing field, would effect a correlation with other subjects, would organize and distribute helpful data to keep the teachers informed on current problems and would by analyzing and discussing classroom observation, specifically aid teachers in the instructional process.

ADDENDUM

We are glad to state that since the survey was made "Helps for Teachers" have been distributed as aids in teaching nature study and geography in Grades 1, 2, 3, and geography in Grades 4, 5, 6. These leaflets stress some of the main features outlined in the course of study such as aims and excursions, emphasize certain aspects of the new course that are radically different from the old course, such as non-requirement of set geographical definitions and regional treatments, and discuss and illustrate "guidance," "informative," and "mixed" outlines to be used in the teaching process. Two of the leaflets present some of the leading factors of a demonstration lesson on Egypt conducted for teachers. The children had had certain habits previously established which they used in developing problems to be further developed in two subsequent lessons. Such a demonstration lesson illustrates possible achievements on the part of children.

In our judgment, this is a step in the right direction. We believe another kind of demonstration lesson would also be helpful, where the children are beginning new habits of thought and work, situations which are likely to confront any teacher who is going through the transition period from an old to a new course of study. In these demonstrations not only the observers but also the children are forming new habits. Here too the leaflets distributed would analyze the geographic ideas, vocabulary, and principles which the teacher is aiming to have the children acquire and also the abilities, skills, and attitudes of mind which the children will develop.

CHAPTER VI

HEALTH EDUCATION

Introduction.—In the Philadelphia schools the activities of health education, the most fundamental in the life of the child, are carried on by several agencies which are only loosely related to one another. The teaching of physiology and hygiene, and classroom, gymnasium, and playground work in physical education are directly educational in their aims. Certain aspects of health education receive a considerable amount of attention in other courses of study, as in civics, general science, and home economics. Other agencies like medical inspection, special classes for the physically handicapped, playgrounds and swimming pools, and school lunch rooms, as well as certain extra school agencies like the Junior Red Cross and the Boy Scouts, all include health educational aims in their programs.

Teaching Physiology and Hygiene.—Course of Study. The course of study in physiology and hygiene for the public schools of Philadelphia issued in 1915, presents ideas on health education which were very constructive and advanced for that period. The actual teaching of the whole subject, however, was presented with the emphasis upon knowledge of facts rather than on active health habits.

The course emphasizes the following: health habit formation rather than the acquisition of knowledge; health considered a normal condition—disease, abnormal; the morbid side of health instruction to be avoided; the work to be cumulative; devices to create interest in habit formation; motive for health lesson to grow out of conditions existing in classes; follow-up work necessary if health teaching is to function; commendation for special effort rather than for results; correlation of teaching with the child's life in home and school; the praising of cleanliness, neatness, and physical improvement rather than attracting attention to the child who represents opposite conditions; results rather than teaching the standard for measuring the teacher's success. The course properly includes health inspection, physical education, and nutrition, as well as physiology and hygiene.

The content of the course does not progress from grade to grade with sufficient rapidity to hold the pupils' attention. The compilers evidently lost sight of the mental development of the child in the effort to have habit established through repetition.

The subject matter does not deal with all of the fundamentals necessary to establish the most valuable health habits, thus the con-

tinuity of the course does not keep pace with the child's physical development; hence the teaching fails, in part, to establish the desired habit.

The course is lacking in subject matter and methods for teachers. In 1915, health teaching, as a part of the school curriculum, was so new that information on subject matter and methods was of prime importance. There was then little accredited literature on either phase of the work. These factors may explain the lack of health teaching and habit formation in the elementary grades and the poor functioning of physiology and hygiene as now taught in the secondary schools.

Results of Teaching. In many of the elementary schools visited the following conditions were noted: both janitor and children failed to do their part in keeping the building clean. Ventilation was bad. The teacher often thought she was too busy to look after it and the class evidently had not been trained to assume any responsibility. This indicates a lack of real organization for health. The personal appearance of many children was untidy or unattractive. Teeth, fingernails, ears, and necks were especially neglected. Hair had not been properly cared for. Apparently little effort was made to see that children washed their hands before going to mid-morning lunch. It was not uncommon for a child to buy lunch, take it to the toilet with him, and return to the lunch room to eat it. At the mid-morning lunch there was served one nutritious hot dish, but apparently no effort was made to prevent children from purchasing sweet cakes and chocolate bars to the exclusion of the hot dish. This seemed to be the fault of the teacher serving the lunch rather than the person planning the ménu. In some cases teachers failed to wash their own hands before serving food to children.

The lunch room floor in one of the high schools for boys was so littered with fruit peelings, paper, and particles of food that it was unsafe. Both principal and teachers disclaimed all responsibility for this condition, expressing the opinion that it was not reasonable to expect a large group of boys to do better. This shows a fundamental lack of grasp of health activities in that particular school which merits careful consideration upon the part of higher school authorities. The fact that hygienic conditions in the lunch rooms of many other high schools are excellent is sufficient refutation of the attitude of principal and teachers in this building.

In some of the boys' high schools there was an attempt to teach hygiene, but from the behavior and exhibition of knowledge of the pupils it does not appear to function very well. In the elementary schools no pronounced general effort was made to promote active health habits in the children as a part of the course. Some individual teachers, however, made an effort to keep clean the hands and faces of the children in their

classrooms, but there was little general movement along this line. In excuse for this unfortunate situation it is necessary to keep constantly in mind that in few schools are there any adequate facilities in the way of running hot and cold water, wash bowls, soap, towels, etc., so that children may keep clean.

In some schools the physical education teachers present health talks to the pupils, but here again the effort is put upon knowledge rather than upon acquiring definite health habits.

The school nurse does little except examine the children and follow up defective cases found by the medical inspector. The nurse should be an integral part of the hygiene teaching of the schools, she being particularly valuable for the purpose of making routine room inspections for observation of the general cleanliness of the children.

RECOMMENDATIONS

It is of little value to hang on the wall a chart showing a picture of a decayed tooth and a sound tooth side by side if little or no effort is ever put forth to interest the children in cleaning their teeth. The dental clinic offers an opportunity for health lessons. The child is now mechanically worked upon, but little is done by way of enlisting his appreciation of what has been done for him or to interest him in future coöperation to maintain the good results derived from his visit to the dentist. Each visit there might be made a teaching clinic, and the lessons carried home to five or six minds. The children at the clinic might well be allowed to watch the operating dentist or hygienist and be given an explanation of results. By putting particular emphasis upon the preventive work of the dental hygienist rather than upon the corrective work of the dentist, the dental clinic might be made a great factor in health education.

Similar use might be made of the time spent at the eye clinic and general dispensary.

The teaching of hygiene should be devoted largely to the formation of health habits, to creating in the minds of the pupils a very definite concept in regard to health matters, not only for the sake of themselves, but for the protection of classmates and other members of the home and community. Special effort should be made to instruct them in first aid, to instill a knowledge of the safety first methods, and there should be given very definite information in regard to industrial hygiene, so that a pupil, before he selects an occupation, may know the dangers he will meet in industry and the methods for avoiding, so far as possible, these dangers.

The best teaching of hygiene that the Philadelphia schools can bring about is the modernization of its school buildings—its school plant. Little progress can be made in establishing health habits so long as

facilities are not provided for the practice of such health habits as clean hands, cleanliness at the toilet, sanitary practices in procuring drinking water, leisurely and comfortable eating (which is now impossible owing to overcrowded and unfortunately located lunch rooms), proper air, and recreation.

All the personnel mentioned in this report and in that on medical inspection should be closely coördinated in the teaching of health. Practically all of this personnel should spare no opportunity to teach health habits and to give out health information. The physician at time of examination has an opportunity in this regard. The school nurses in their daily contact with pupils in the school and in the home should constantly emphasize the need of cleanliness, proper diet, proper clothing, protection from infectious disease, and the hygiene of the school and of the home. Teachers of special classes should put special effort upon this sort of teaching. They have under them the type of pupils which needs it most. The instructors in physical education have splendid opportunities for instilling ideas of health and they, too, should be constantly emphasizing the necessity of proper food, sleep, recreation, clothing and correct posture. Those concerned with the feeding of special classes should understand that a main part of their duties is proper instruction of pupils in regard to nutrition.

Every effort should be used to instill into the minds of all pupils accurate and usable information in regard to diet, not only as regards the chemistry of foods and the proper kind of foods for each meal and the balance of foods for each day so that proper growth may be secured, but information in regard to economical food purchases and as regards the necessity of sanitary food handling, preservation, and serving.

The general teaching corps must understand that they owe a duty to the health of the child greater than that they owe to his mental development, and that no opportunity should be spared to inculcate health habits, proper physical activities, information in regard to the hygiene of industry, of the school, of the home, and also proper customs in regard to eating, sleeping, clothing and recreation.

More subject matter and more on methods for teachers should be incorporated in the course of study. No pains should be spared to inculcate in all teachers the new idea of teaching health activities for living.

Physical Education.—Organization and Instruction in the Elementary Schools. This important part of Health Education is under a Director of Physical Education, having directly under him the special teachers of physical education in the normal, high, and junior high schools, and four special assistants and nineteen assistants having

charge of the teachers in physical education in the elementary schools. These assistants have supervision of all classroom teachers who teach physical education, all special class physical education activities, athletics, playgrounds, swimming, hiking, and training school instruction.

The activities covered in the elementary schools include very informal marching tactics, setting up exercises, also very simple track and field work, games, and folk dances.

Owing to the fact that very few elementary buildings have anything like proper gymnasiums or playrooms and lack a sufficient number of properly trained instructors, the type of work has been modified to include only extremely simple exercises which, necessarily, must be very monotonous to both teachers and pupils. The amount of time actually used does not average over sixty minutes per week. This has brought about an extension of playground activities and athletic competitions. These latter, however, have not gone so far as they could go if the director were given a properly trained corps of supervisors and district supervisors.

The method of teaching presupposes that the daily instruction is to be done by the elementary teacher under the supervision of the director and his assistants. Each assistant is charged with the direction of the work of from 219 to 262 elementary teachers. It is obvious that these assistants cannot visit each teacher more than once in every four or five weeks. In schools where there is departmental teaching the physical training work, as a rule, is in the hands of instructors who have, to a slight extent, especially prepared themselves for it. There are at present 140 such instructors. This work also is supervised by the assistants. The length of time devoted daily to physical training varies. In many of the schools all classes have at least fifteen minutes of work daily. In others the first four or the first six grades have fifteen minutes of work daily and the upper grades have one fifty-minute period a week. In still others, in all grades two periods a week of thirty minutes each are devoted to physical training. In one school on the platoon system, each class is given forty minutes a day.

A course of study has been prepared by the director for the use of the classroom teacher in conducting this work. One set of exercises has been prepared for grades 1, 2, and 3; another set for grades 4, 5, and 6; and a third set for grades 7 and 8. Certain marching requirements are demanded of each grade. A roster of games and dances has been arranged by grades and months. Charts showing the age-aims for many track and field events have been prepared. In grades 1, 2, and 3 there are no regular prescribed aims but the teachers are urged to give the pupils an opportunity to try the standing broad jump, the overhead throwing of a basket ball, and the running of short distances at full

speed. In grades 4, 5, and 6 the pupils practice the standing broad jump, fast running—50 yards, and the basket ball far overhead throw, with a view to attaining the age-aims or the passing mark for each age and sex. In grades 7 and 8 the same events are practiced and in addition the boys have chinning and the girls knee-raising.

These various activities, building up a type of physical education that will reach all pupils through their play and competitive interests, is in line with present-day thought in physical education, and the efforts of the Director in this particular are to be commended, especially as he was one of the first to undertake city-wide work along these broad lines. This program should have the fullest support of teachers, principals, and superintendents.

In most cases exercises are given by number and are so designated. There is little attempt to have the work done by command and practically all the value usually claimed for formal gymnastic exercise is therefore lost. Rarely is any attempt made to secure the correction of individual faulty positions. These exercises, therefore, have practically no corrective value. The marching, accentuated usually by striking heavily the left foot upon the floor and often emphasized by the teacher clapping her hands, is poor and results in a stamping, unnatural gait. The teachers who are conducting the physical education work in departmental classes show a lack of proper understanding of the fundamental principles of physical education, having had little technical, normal school training for this work. The regular classroom teacher, upon whom falls the burden of conducting this work in most instances, often fails to look upon it in the proper spirit, it being to her merely a chore with which she must go through. The work gives every evidence of having been arranged to meet a minimum capacity of the teacher, rather than of being an effort to bring the work up to a proper standard.

Corrective exercises to be practiced at home, are prescribed for approximately 5500 pupils yearly. These pupils are selected by the school medical inspectors and by the classroom teachers and supervisors of physical training.

Two courses of study have been prepared for the orthogenic backward pupils. These classes are under the supervision of an assistant. Splendid results are obtained in a number of these classes, while in others the results are practically nil.

After-School Activities. Only 50 of the 355 elementary public schools in Philadelphia reported on after-school activities during the calendar year 1920. Of these, 18 reported that they were doing nothing with organized after-school activities. The daily average number of pupils participating in such activities varied from 108 pupils for the

month of June to 438 pupils for the month of November. For the whole year of 188 school days the average number participating each school day was 242 pupils. For the year the average daily attendance in the grade schools was 183,520. There were then participating each day in after-school physical education activities in the elementary schools only 0.13 of 1 per cent of the possible number.

After-school play and athletics are in the hands of the classroom teachers aided by the director's assistants. This work is optional and in many of the schools, where the principals and teachers are interested and enthusistic, the results are very gratifying. In other schools the recess periods also are organized for supervised play, and many of the competitive games are played during these periods. More pupil leadership might well be used in the organization of the game groups. Frequently much time is wasted by the teacher attempting to organize several groups without assistance. The emphasis given to athletic tests is desirable, but they might better be given as a part of the after school activities.

In many of the schools, competitive play is organized by having what are known as color contests. Each class is divided into two equal groups, each group representing one of the school colors and thereafter all competition in games and athletics is between the two colors within the class. A captain is appointed for the boys of each group and also one for the girls. These captains conduct the various track and field events and most of the games, under the supervision of the teacher. Under this plan every child gets an opportunity to enter competition, and aggressive play leaders are developed. With such pupil leadership the teacher's time is used to better advantage.

In many of the elementary schools the principals, teachers, and pupils are greatly interested and enthusiastic about the work, which is snappy and spirited and the results deserving of high praise. In many others the work is slow and lifeless and a great deal of time is wasted in getting the classes ready for work, in giving commands, and in their execution. In most cases this is the result of lack of interest, of lack of training on the part of the teacher, and of the need of referring constantly to the lesson plan.

ORGANIZATION AND INSTRUCTION IN THE SECONDARY SCHOOLS

The quality of gymnastic work in the secondary schools varies widely, in some schools being good, but much of it lacking the vigor and precision which is the mark of efficient, well trained, painstaking teachers. It varies widely not only in quality, but in content and ideals, this variation being traceable to the theories of the different training schools from which the teachers come. This is a necessary

result of the system of selection and assignment of teachers, and of the lack of adequate technical supervision which is so impeding the development of a real standard in physical education in the Philadelphia secondary schools.

Equipment. The director of physical education passes upon all physical training and play materials or equipment that are requisitioned by any school. All additional material and equipment for physical training, play, or swimming is ordered by the director and sent to the schools according to their needs as determined by the assistants and supervisors. Accurate records are kept of the distribution of all such materials.

Field Days. The department encourages three kinds of field days: field days for the high schools, sectional field days for the elementary schools, and local field days for the individual high or elementary schools. During May and June, 1920, there were scheduled five general field days for the boys of all the high schools: one each for freshmen, sophomores, juniors, and seniors and one championship meet; four field days for the pupils of individual high schools; four sectional field days for the boys and girls of all elementary schools, in which 2412 took part; one general field day for the elementary schools, in which 6202 took part; and approximately fifty local field days for individual elementary schools.

Too much time is taken from the educational phases of physical work to develop specially selected groups for these field days. These field days are spectacular and have a value in educating the public regarding the gymnastic and game activities of the schools, but they should be demonstrations of cross-sections of regular work, not exhibitions of specially trained groups.

Play Area and Gymnasiums. In practically all the elementary schools the work is taken out of doors except during inclement weather, when it is necessary to utilize the classrooms or halls. In the platoon system of schools, and in all schools having departmental work, the physical training work suffers greatly because of lack of gymnasium facilities. Many schools have small, inadequate play yards, making the participation in games and track and field work impossible. Few schools have gymnasiums or playrooms, In several schools classrooms have been converted into playrooms by removing the seats and desks, but these are merely makeshifts and are inadequate.

In the secondary schools there is provision for gymnasiums and some equipment. Several of the gymnasiums, however, are wholly inadequate both because of their size and location and because of the spotting of the floor with posts and pillars The equipment provided

varies greatly as regards both gymnastic equipment and facilities for dressing and bathing. While equipment is ample in some places, it is totally inadequate in others. One high school reports having received no new equipment in eighteen years.

The playground area of most of the schools is wholly inadequate. The survey of school properties discloses the fact that buildings containing 81 per cent of the pupils have less than 30 square feet per pupil enrolled, and that 54 per cent of the pupils have less playground area per pupil than the 15 square feet allotted in the classroom. This means that the space available for playing games by any large number of pupils at the same time is wholly inadequate and seriously handicaps efforts toward the physical upbuilding of the pupils.

Playgrounds. The playground activities of the city are carried on partly by the Board of Education under the supervision of the Director of Physical Education, and partly by a Municipal Bureau of Recreation.

In the summer of 1919 there were opened by the Board of Education at the beginning of the season 109 playground centers. This number was later reduced to 77, 32 being discontinued during the season because of inability to secure qualified teachers. In the 77 centers a total of 123 playground instructors were employed with an average attendance per day per teacher of 49 children. There were also carried on 19 school-year playgrounds for the seven months, September to November and March to June, inclusive, with 19 teachers, having an average attendance per day per teacher of 206. The sessions were held after school and were in operation on an average per day of 2.7 hours. They were closed during the winter months because of poor attendance. One evening playground recreation center with two teachers was maintained. The sessions were held during July and August on an average of 2.5 hours per evening with an average attendance per teacher per day of 81. The total cost of this playground work during that summer was $46,293.72.

There were also 15 swimming centers conducted with 24 teachers with an average attendance per day per teacher of 20, this instruction being in public bath houses. Fifteen centers had facilities for girls open 16 hours a week; 14 handled boys from 12 to 16 hours per week. The cost of this activity for the year 1919 was $2224.76.

For several years previous to 1920, school garden activities have been carried on, $17,101.26 being spent for this purpose in 1919. Unfortunately this activity was dropped in 1920 for "lack of funds."

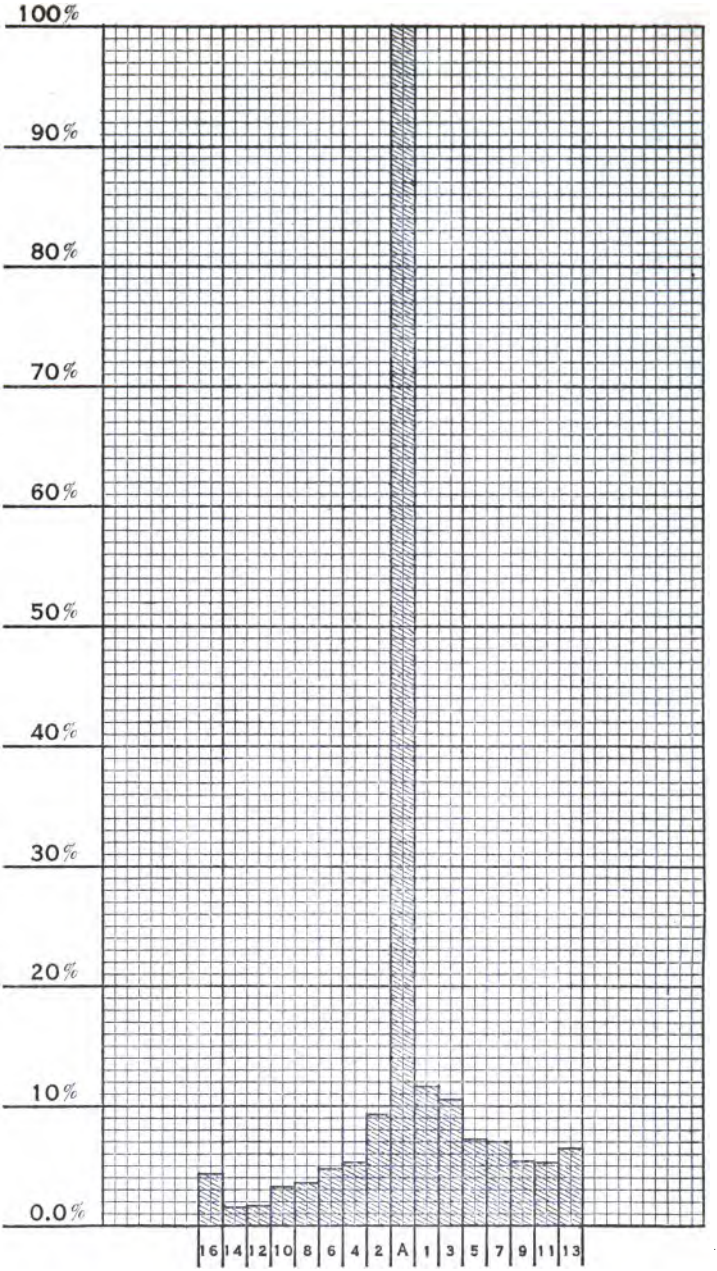
Bureau of Recreation. The Bureau of Recreation, a city department entirely independent of the Board of Education, spent in 1920, $268,743 in carrying on 32 year-round and 8 summer recreation centers, the 8 summer ones being on city ground. They also pay the running

expenses of 6 more, the latter being unequipped, as they are on private ground. They also maintain 9 open air swimming pools and 20 public baths which are really covered swimming pools. Twelve of the recreation centers are in public schools, carried on two nights a week at a cost of $7268.50. The annual total attendance in the recreation centers is 4,813,914; at the swimming pools, 448,880. The recreation centers located in public schools are run in the evening, and no child under fourteen is admitted to them. Some of the buildings used as city recreation centers are used for school physical activities during school hours, if the schools lack facilities. When this is done the Board of Education pays for part of the heating cost. Several of the public schools are using recreation center grounds but not the buildings. The fifteen pools used by the Board of Education for instruction in swimming are controlled by the Bureau of Recreation although the Board of Education pays the salary of the instructors employed to teach public school pupils.

Teacher Training. Under the Director of Physical Education there is carried on a course for the professional training of teachers in playground supervision. This class meets once a week, two hours each session, for twenty weeks. In order for candidates for positions to enter this course they must have had at least one year of normal school training. Most of them have had two years and some are already teachers in the schools. This course has been necessary because of lack of properly qualified teachers for playground activities, and has resulted in a group of playground teachers practically uniform in training who understand thoroughly the desires of the Director. The expense for this work is wholly justified.

Athletics in Secondary Schools. As is often the case, interscholastic athletics are emphasized at the expense of intra-mural competition. This means that the few, physically powerful pupils receive a large part of the attention of the instructors in physical education, while the more nearly normal, and the physically subnormal, pupil, who needs this attention much more than does the strong one, is greatly neglected. A compilation of the after-school physical education activities of the different high schools shows the following situation.

Of the ten high schools reporting, the average daily participation in after-school physical education activities varies from 64 to 152 pupils per school for boys, and from 17 to 158 pupils per school for girls. When the percentage of the number possible is used as a basis of computation, the range of boys is from 5.1 per cent at West Philadelphia High School to 11.67 per cent at South Philadelphia High School, and for girls from 1.5 per cent at South Philadelphia High School to 9.1 per cent at the



SUPERVISED AFTER-SCHOOL ACTIVITIES IN PHYSICAL EDUCATION, PHILADELPHIA HIGH SCHOOLS, 1920

Showing the percentage of the daily average number belonging actually engaged in such activities each day

Girls	Per Cent	Boys	Per Cent
2. William Penn...	9.1	1. South Phila.....	11.6
4. Kensington.....	5.1	3. Frankford.....	10.5
6. Girls' High.....	4.8	5. Germantown....	7.1
8. Germantown .	3.6	7. Northeast.....	7.0
10. Frankford.....	3.2	9. Central.....	5.3
12. West Phila. ...	1.6	11. West Phila.....	5.1
14. South Phila.....	1.5	13. Average.....	6.4
16. Average	4.2	*A. Maximum Score*.	100.0

William Penn High School. Of these schools reporting, the percentage of the number possible for all boys is 6.4 per cent and for all girls is 4.2 per cent. For both boys and girls together it averages 5.3 per cent.

In absolute figures these reports show a daily average of only 998 pupils engaged in after-school physical education activities out of a possible 18,604. (See Chart.)

Athletics in all the schools are managed by the special teachers of physical education. A supervisory committee appointed annually by the superintendent has charge of all athletics in the schools, but most of its energies are taken up with interscholastic affairs. It is composed of one teacher from each high school, two from the elementary schools, and two from the superintendent's department. The Director of Physical Education is the chairman.

Some of the secondary schools have athletic fields under their control, others do not. These fields are usually located at a considerable distance from the school, thus rendering it very hard to make the field a part of the daily life of all the pupils, as should be done. Particular stress should be put upon getting every girl, as well as every boy, who is organically sound into some sort of competitive activity.

For regular class work there should be formed special classes for training squad leaders. Otherwise, with the large classes necessary in many instances, proper supervision, both for proper performance of exercises and for safety, is impossible.

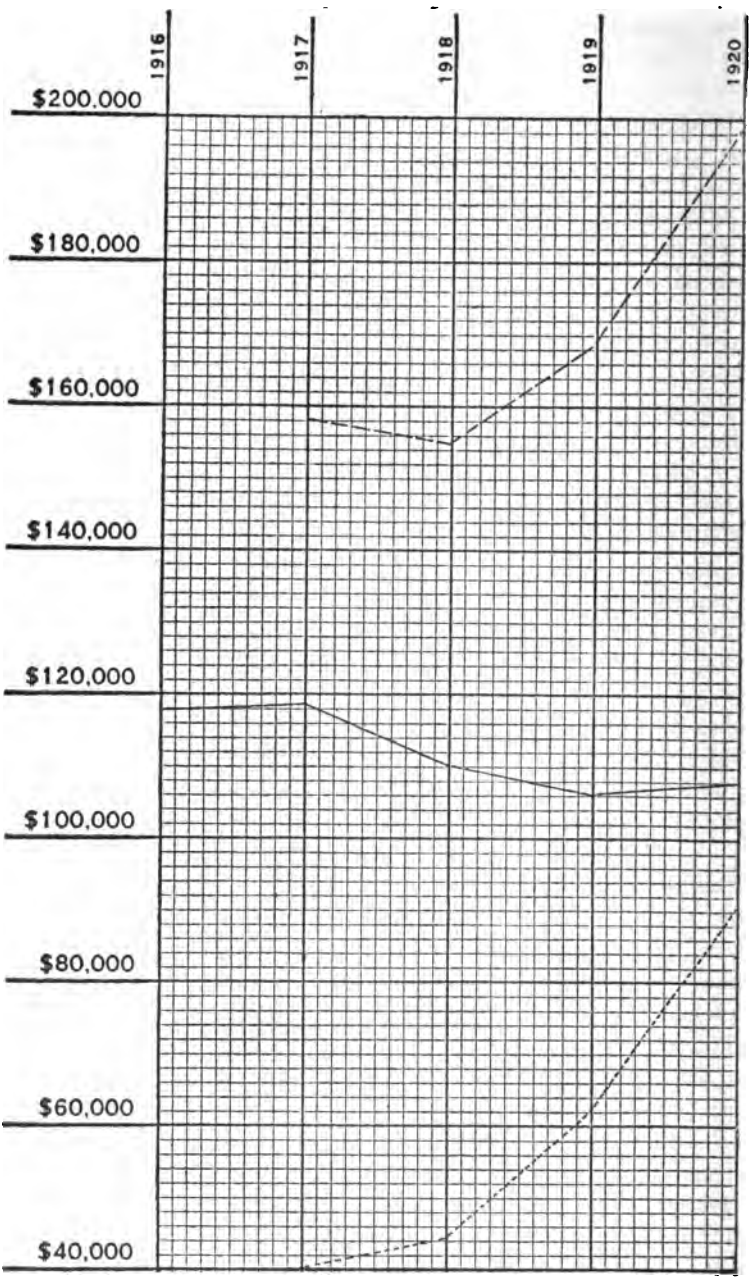
The present time allotment for work in gymnasiums should be increased, and the periods rearranged, so that proper dressing for gymnastic work, and bathing after such work, could be insisted upon.

Budget. In considering the costs of the physical education program all the physical activities have been grouped. These include school gardens, playgrounds, swimming, special physical education supervisors in elementary schools, the training class for playground teachers and physical education for secondary schools.

Following graphs show the amount of money spent for these purposes, the expense per child, and the proportion of the school dollar. The per capita expense for secondary schools is figured on the secondary school average number belonging. The other per capita figures are based on the grade school average number belonging.

The percentage of the school dollar given is the percentage of the amount given in annual reports as the total current expenses of day schools. This sum does not include money spent for permanent improvements or new equipment.

In the graphs showing comparative expenditures for secondary and elementary schools, the secondary schools are charged only with the



ANNUAL EXPENDITURES FOR PHYSICAL EDUCATION IN SECONDARY SCHOOLS, ELEMENTARY SCHOOLS AND TOTAL EXPENDITURES FOR BOTH

Each small square represents $2000

Elementary,———; Secondary,.....; Total,- - - - - - - -

GRAPH C

expenditures for special teachers in physical education, while the elementary schools are charged with all the other factors.

A study of these graphs brings out certain striking facts. Gross expenditures for these activities for the schools as a whole have been increasing, having risen from $159,580 in 1917 to $199,287 in 1920, an increase of 24.8 per cent. For secondary school activities they have risen from $40,573 in 1917 to $91,112 in 1920, an increase of 124.3 per cent. For elementary school cost of special physical education instructors, supervisors, playgrounds, etc., there has been no increase, the expenditures for these purposes having fallen from $119,048 in 1917 to $108,174 in 1920, a falling off of expenditures for these most important activities of 9.1 per cent. (See Graph C.)

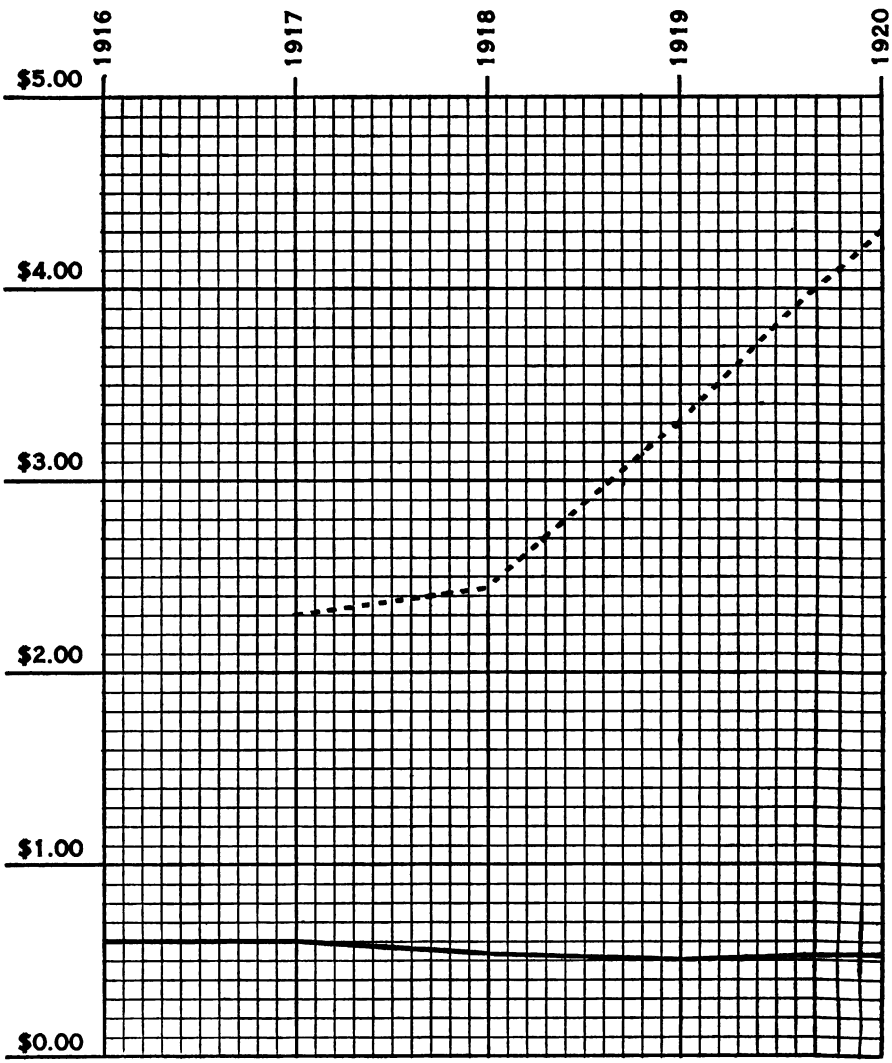
On the basis of the annual expense per child, which is a more accurate standard of estimate, there shows for the secondary schools a rise from $2.31 per child in 1917 to $4.32 in 1920, an increase of 87.0 per cent. In the elementary schools, however, the expenditure per child has fallen from 60.03 cents in 1917 to 52.1 cents in 1920, a decrease of 11.5 per cent. (See Graph D.)

The percentage of the school dollar used for these activities, in secondary and elementary schools respectively, shows even more prominently the favoring of the secondary school pupil, and discloses a tendency that should no longer be permitted. In 1917 the percentage of the school dollar allotted to physical education for secondary schools was 0.44 per cent. In 1920 this had risen to 0.70 per cent, an increase of 59.0 per cent. During this four year period the percentage of the school dollar allotted to elementary schools for these activities fell from 1.29 per cent in 1917 to 0.83 per cent in 1920, a decrease of 35.6 per cent. (See Graph E.)

The most distressing fact is that the city of Philadelphia is spending, for these specially trained instructors and for the supplies which they use, 0.70 per cent of the school dollar on behalf of 20,000 secondary school pupils and only 0.83 per cent of it on behalf of over 200,000 elementary school pupils.

Qualifications of Teachers. A classification of the qualifications of teachers in physical education employed in the Philadelphia schools brings out certain important facts. For purposes of discussion these teachers may be grouped as the assistants to the Director on the one hand, and the instructors in high schools on the other. In the first group, answers to the questionnaire were received from 24 persons; in the second group, from 54.

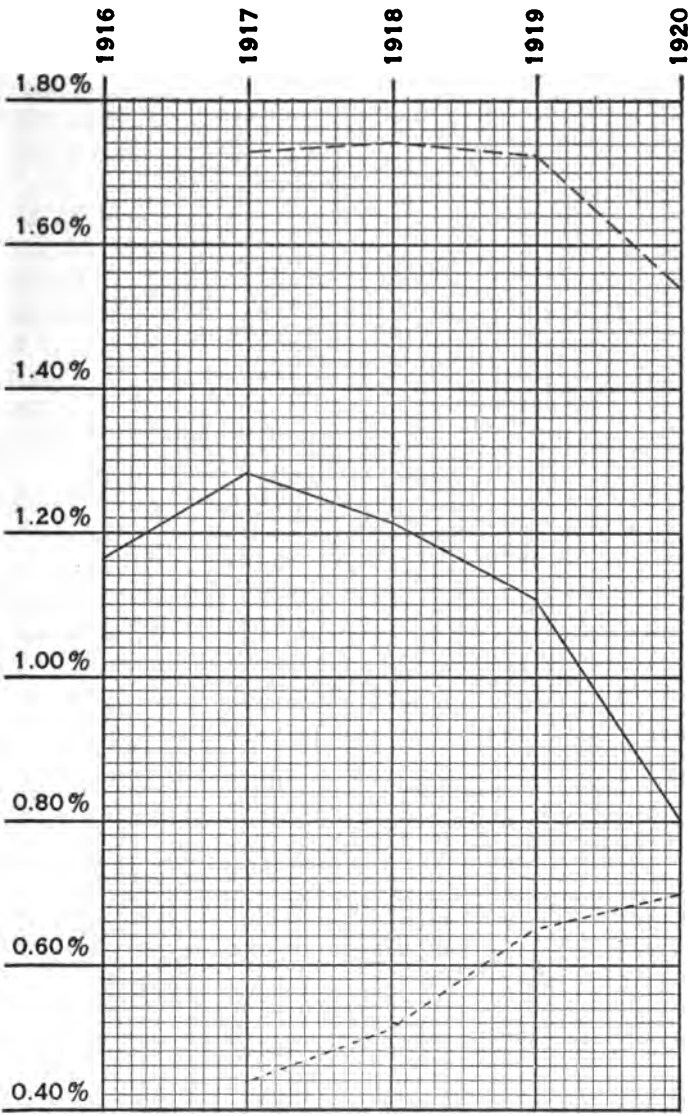
Of the first or supervisory group, 18, or 75 per cent, are graduates of Philadelphia high schools; 15, or 63 per cent, are graduates of the



EXPENDITURES PER CHILD PER YEAR FOR PHYSICAL EDUCATION ACTIVITIES IN ELEMENTARY AND SECONDARY SCHOOLS, 1916–1920

Elementary,————; Secondary,.....

GRAPH D



PERCENTAGE OF SCHOOL DOLLAR USED IN PHYSICAL EDUCATION
SECONDARY SCHOOLS, ELEMENTARY SCHOOLS AND TOTAL

Each small square represents .02 of 1 per cent

Elementary,———; Secondary,.....; Total,- - - - - -

GRAPH E

Philadelphia Normal School or School of Pedagogy, neither of which has a special course in physical education, 3 more being graduates of a private Philadelphia training school. Only 6, or 25 per cent, received their education or technical training outside the city of Philadelphia; 87 per cent of them came from four normal schools whose type of instruction is very similar. Six of them hold bachelor's degrees. Only 6 of them have ever done any regular full-time teaching outside of the city of Philadelphia.

In the group of high school instructors we find that 36, or 67 per cent, are graduates of Philadelphia high schools; that 15, or 28 per cent, are graduates of the Philadelphia Normal School or the School of Pedagogy, 14 others being graduates from a private training school located in Philadelphia. Fewer than half of the group have received their education or technical training outside of the city of Philadelphia. Of this group 91 per cent came from the same four normal schools as did 87 per cent of the supervisory group. Only 8 of them, or 15 per cent, hold collegiate degrees. There are on the list one dentist and two physicians. Twenty-five, or 47 per cent, have had some full-time teaching experience outside of the Philadelphia schools.

When we combine the two groups we find that 68 per cent are graduates of Philadelphia high schools, 39 per cent of Philadelphia Normal School or School of Pedagogy, 22 per cent of a private Philadelphia training school, and 90 per cent of them come from the four normal schools mentioned; that only 9 per cent of them have had training in normal schools of physical education, excepting summer school work, outside of the city of Philadelphia; and that 61 per cent of these teachers received both their education and technical normal training in the city of Philadelphia.

No matter how good the school system from which teachers come, any such close inbreeding as the above analysis shows inevitably leads to inefficiency and lack of educational progress. This condition is largely due to the method of appointment which requires candidates to come to Philadelphia for examination. No community can build up a really expert training corps with a broad outlook, when their choice of teachers is narrowed by any such requirement. Teachers who have really accomplished something elsewhere will seldom submit themselves to an examination, and many of those who would, and also a larger number of the young people coming from excellent schools scattered all over the United States, can not afford the expense of the long trip necessary to appear for examination.

This inbreeding is found not only in the system itself but in the individual high schools. In one of the high schools for girls five out of the six teachers are graduates of the same normal school of physical educa-

tion. In one of the high schools for boys four out of the five teachers are graduates of the same normal school of physical education. In another of the high schools for boys only three of the five instructors have had enough normal school training in physical education to receive a certificate for it from the school attended, all three coming from the same normal school.

RECOMMENDATIONS

In rating teachers of physical education, a rating coefficient should be worked out and the percentage of the pupils engaged in after-school physical activities should be an important factor in this.

The regular classroom teachers in the grades should be assembled at frequently recurring times for special instruction in physical education work. No valid reason exists why teachers should not be given special group instruction in this part of their work, just as in other subjects of the curriculum. As rapidly as gymnasiums and playgrounds are constructed, technically trained special teachers in physical education should be employed, at least for all pupils above the fourth grade.

More desirable results could be obtained if there were at least one specially trained instructor in physical education assigned to each elementary school. There should be a definite ratio of teachers per assistant supervisor of physical education.

In physical education, the Philadelphia schools need better and larger facilities for carrying on the various activities which go to make up a properly rounded effort. Everything relating to this should be put directly under the supervision of the Director of Physical Education. He should be provided with three supervisors of physical education. One should be directly in charge of the physical education activities of the secondary schools including the normal school, high schools, and junior high schools. The second should be directly in charge of all the physical education activities in the elementary schools, including the instruction in physical education which is given by the regular classroom teachers, by the special teachers of physical education in the regular classes, and in the special classes. Under this supervisor there should be several district supervisors. A third supervisor should have charge of all the playground and recreational activities. The present crossing and duplicating of effort on the part of the playground activities of the Board of Education and the Bureau of Recreation is not only wastefully expensive but unnecessary. Efforts should be made to modify the law so as to consolidate this work under one of the supervisors of Physical Education, holding authority, through the Director of Physical Education, from the Superintendent of Schools and the Board of Education.

The amount of playground area for each building should be increased so that there would be at least 50 square feet of space for each pupil enrolled.* So far as possible land should be bought for this purpose. Where, because of crowded conditions or extremely expensive land, this is not feasible, arrangements should be made, so far as structure of buildings is such as to make it safe, to use the roofs of school buildings for play purposes. As buildings are built or remodeled the wastefully expensive, steeply pitched roof should be replaced by flat areas which may be used for play and recreation purposes.

Ideally, every elementary school building should have one gymnasium or large playroom for each thousand pupils or major fraction thereof. In the future no buildings should be built without making ample provision in this regard. In old buildings, basements or empty classrooms should be remodeled to provide these facilities. Simple standard equipment should be provided for each of them, so that all schools may be on an equality in this regard. For such buildings there should be provided specially trained, expert instructors.

Whenever possible the gymnasiums, playrooms, and playgrounds should be provided with shower baths which should be used not only by the elementary school pupils, but by evening groups from the community.

Every pupil should have the opportunity to learn to swim under expert supervision. Those swimming pools already in existence should be utilized to the fullest extent. In those districts where such facilities are not easily accessible, they should be provided in school buildings. This should be done only if sufficient funds are available, not only for building swimming pools, but for safeguarding the children, both by proper sanitary handling of the pool itself and by providing a sufficient corps of expert instructors to enforce sanitary care on the part of pupils and to prevent accidents. The problem has been solved in some communities by placing these pools in secondary school buildings, to which pupils from nearby elementary schools are sent for swimming instruction.

In the high schools, facilities for physical education should be increased. Every high school ought to have a play and athletic field over which it has control. These should be located as near as possible to the school building which they are supposed to serve.

Facilities for physical education in the buildings should be modernized and made more ample as regards floor area. So far as possible gymnasiums which now have posts upon the floor should be remodeled to get rid of these obstructions to efficiency, or new gymnasiums should

* Some authorities place this minimum at 100 sq. ft. per pupil. National Committee for Chamber of Commerce Coöperation with the Public School. Geo. D. Strayer, Chairman.

be built for those schools. Proper shower bath and locker facilities should be provided for each secondary school. There should be one gymnasium for each six hundred pupils, or major fraction thereof, enrolled. In each of the secondary schools there should be provided a standard, modern, equipment for gymnastic work so that all phases of work, from free play and athletics up to and including rhythmic work, plays, games, formal floor and apparatus work, may be used. It is particularly important that provision should be made so that special exercises and specifically prescribed corrective gymnastics for those pupils who need it, may be carried on under proper conditions.

Every effort should be made to increase the technical training of the personnel engaged in physical education in both the elementary and secondary schools. This may be brought about by refusing to employ any persons in physical education work who do not have adequate technical training, and by insisting that those who are now employed in such work, who do not have such training, get it within the next two years.

In the secondary schools particularly, there should be a re-assignment of teachers so that the present altogether too common situation, where the school director of physical education and the major portion of his assistants come either from the same normal school in physical education or from a normal school which has the same type of training, would no longer exist. The physical education faculty of each school should represent as broad a point of view as possible regarding the different types and methods of physical education. This will check the present tendency toward educational inbreeding, and prevent narrowness in this activity.

It should be the policy to organize in each high school a Department of Health Education, with a well trained physician, a woman for girls' schools, a man for boys', at its head, preferably one who had technical, normal school training in physical education. In care of such a department should be placed the physical examinations, physical education, teaching of hygiene, and the supervision of the sanitation of the building, including lunch room activities.

Indirect Methods and Agencies.—Medical Inspection and School Nurses. As pointed out above, medical inspectors and nurses should have an active part in a program of health education. Measuring and weighing all pupils at the time of their physical examination or oftener is not merely a means to sort out the cases suspected of being malnourished. Still less is it to pile up statistics. It should be done in a way which will interest all boys and girls in their own growth and development and in the conditions which favor it. Diet, sleep, fresh

air, exercise, etc., become practical matters when related to conditions made manifest by the medical inspector's physical examination. Correction of physical defects by fitting glasses, by dental care, by orthopedic exercises, etc., are not merely of intrinsic value. The school nurse's visit to the home is not only follow-up medical work; it has its social and educational aspects as well, Medical inspectors, nurses, instructors in physical education, elementary school teachers, teachers of special classes, and student counselors in secondary schools should coördinate their efforts and spare no efforts to teach health habits and to give out health information.

The teaching corps must understand that they owe a duty to the health of the child greater than that they owe to his mental development. The result will show itself in better school spirit and morals, a higher percentage of attendance, and better attention and learning ability in other school work.

Mental Hygiene. There is a hygiene of mental functioning that is closely related to physical health and well-being. Generally speaking, the pupils who are taller and heavier for their age do better class room work.* Teachers should be quick to notice mental sluggishness on the one hand, and excitability, lack of emotional control, and instability on the other. Pupils who show these signs should be referred for a special medical examination and a home visit should be made by the nurse. Choreic children should not be kept in school for the entire school session and in many cases should be temporarily excluded with helpful medical advice or reference to the family physician. The restlessness of the choreic child is often mistaken for willful disorder.

Schoolroom decorations, the teacher's voice, weather conditions, in fact all the surroundings of the child, may stimulate willing effort, or cause irritability, lack of attention, and disorder. Surly or sullen behavior may be due to unsatisfactory home conditions.

These are all matters of mental hygiene which call for careful attention from the teacher. These problems are particularly important in secondary school work. In junior and senior high schools all teachers should make it part of their work to understand something of the mental hygiene of early adolescence. This is one of the problems of coeducation of the sexes. Girls, maturing earlier than the boys, call for different treatment if both boys and girls are to be stimulated to a maximum of effort and if the mental development of both is rightfully considered. In mental hygiene, as in other fields of health education, all who come in contact with pupils must work together.

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* "Physical Growth and School Progress," B. T. Baldwin, U. S. Bureau of Education Bulletin No. 10, 1914, p. 82.

Special Classes. The special classes for the physically handicapped pupils discussed elsewhere have an important function in this plan of health education. Where the physical handicaps can be removed, the work done is bound to play its part in health education. No increase in special classes for undernourished and anemic children is ever likely to deal adequately with the problem of malnutrition. The numbers are too large. Yet each child in these classes who is having a special regimen of diet, rest, exercise, and fresh air is an object lesson in the school and in the home. Other children become interested in their gain in height and weight. Parents learn the value of milk and other nourishing food, and the importance of rest, exercise, and fresh air.

Social Studies. In the classes in civics the pupil becomes interested in the problems of public health and sanitation. Pure water supply, milk and food inspection, quarantine of contagious disease, hospitals and dispensaries, garbage collection and disposal, sewer systems, building regulations, and the prevention of industrial accidents and disease, are all questions of community control which play a part in health education. In secondary schools such questions as workingmen's compensation, health insurance, industrial hygiene, and the like are introduced.

Home Economics. Courses in home economics have a direct bearing on problems of health. Lessons on diet, food values, and the preparation of food make an important contribution to health education. Instruction in the care and feeding of infants has its part. Home planning includes matters of ventilation, heating and sanitation.

Other Studies. Instruction in health principles is frequently correlated with work in still other studies. Dramatization makes for facility in language expression, calls for posters from the art classes, simple costuming by the class in sewing, and some furnishing of simple stage properties by the boys in the shop. General science and geography give a background for various phases of the work. Comparing height and weight with standard measurements makes interesting material for arithmetic.

The School Itself. As stated above, some of the best teaching of hygiene that the Philadelphia schools can bring about will be through making each school plant a demonstration of the health principles which are to be taught. Little progress can be made in establishing habits of personal hygiene unless facilities are provided for the practice of such health habits as clean hands, cleanliness at the toilet, sanitary practices in procuring drinking water, leisurely and comfortable eating, breathing pure air, and taking time for exercise and recreation. Insistence on

correct posture and gait are more than matters of discipline and order. The care of the building by the janitor should also have its lessons for the pupils.

It is not enough to say that the building is more sanitary, better heated and ventilated, and more thoroughly cleaned than hundreds of the homes from which pupils come. The whole school plant should be an object lesson in health principles.

Home Contacts. All the activities and agencies which make contacts with the home have an important function in a public health program. This has been emphasized above in discussing the work of the school nurses in their work of following up the recommendations of the medical inspector. Its value is not confined to children of school age. This work has its influence on the home in the care of children of pre-school age as well.

There is a large field for health education in dealing with groups of parents who are brought to the school for mothers' meetings, parent and teacher associations, and the like. Physicians, instructors in physical education, and others interested in infant and child welfare, in addressing such groups find their opportunity through these contacts for definite teaching in various lines of health education.

RECOMMENDATIONS

Care of Buildings. Many improvements in the sanitation of buildings should be brought about if a program of health education is to become effective. Every effort should be made to keep buildings not only in a clean condition throughout, but tidy. Pupils who are being trained in proper habits of cleanliness must have clean sanitary surroundings and learn to take their part in maintaining these conditions. High school pupils in particular should not permit evidences of lack of tidiness in or about their building.

Attention to heating, ventilation, and lighting, discussed elsewhere, is not only essential in producing healthful conditions for child growth and school work but plays an important part in health teaching. Ample provision of bubbling fountains not only insures a sanitary method of water distribution but teaches the pupil a daily lesson in hygiene.

Facilities for Cleanliness. There should be provided an adequate supply of washbowls with running hot and cold water, soap, and paper towels, so that a pupil may have no excuse for not having his hands and face habitually clean. In those sections of the city where the homes do not have adequate bathing facilities, such facilities should be provided at the school. Shower baths should be installed, and instruction and habit formation in their use should become one of the aims of health

teaching. It is useless to teach hygiene, physiology, or any other phase of work for better health if there is no provision for cleanliness and for establishing habits of keeping clean.

Toilets. Toilets throughout the city should be modernized. There are numerous toilets that are not only antiquated, but are so poorly cared for that every temptation is offered for careless use. Toilet paper should be provided in all schools.

Gymnasiums and Playgrounds. As rapidly as possible all school buildings should be provided with suitable playground and play-room or gymnasium. In large buildings one such room is not enough; two or more rooms are needed. No new building should be constructed which does not make such provision. Basements or vacant rooms in older buildings should be remodeled to provide for proper physical activities within the schools. No gymnasium should be constructed without the approval of the Director of Physical Education in matters of size, shape, and content.

Playground area should be increased. The standard of size should be fifty square feet for each pupil, the average number belonging being used as a basis of computation.

Normal School. The building occupied by the school of observation and practice of the Normal School should be modernized so that it is up-to-date in every particular. Work in this school is now being carried on under insanitary and depressing conditions, and among dangers of fire and accident. It should be kept in mind that in this school Philadelphia is laying the foundation of the ideals of its future teaching corps. It is extremely unfortunate for these young teachers to begin their professional work in the belief that such classroom conditions as prevail here are permissible. The practice school should have the most modern building in the city in all matters pertaining to health so that proper standards not only of teaching but of school hygiene and correct living, may become acquired by these future teachers.

SUMMARY

1. In Philadelphia schools the activities of health education, the most fundamental in the life of the child, are carried on by several agencies which are only loosely related one to the other.

2. The course of study in physiology and hygiene should be revised.* More emphasis should be placed on healthful living, on the formation of health habits and on the indirect methods of teaching hygiene. Evidence that the instruction in health education is forming effective health habits is at present lacking.

*See Addendum.

3. All school employees, including physicians, nurses, physical education instructors, classroom teachers and supervisors of any subject, should function in teaching hygiene, using such agencies as the special class, school lunch, dental clinic, medical examination, and playground activities. Facilities such as running water, soap, towels and the like for practicing proper health habits should be provided.

4. Few elementary buildings have proper playrooms or gymnasiums. The quality of the work in physical education varies greatly in different buildings, in some cases being slow and lifeless, while in others it is deserving of high praise. This variation is due to lack of a sufficient number of thoroughly trained special teachers and supervisors, and to inadequate training of regular classroom teachers in physical education. The technical training of special teachers, particularly of those in elementary schools, should be increased.

5. Elementary school playground area is wholly inadequate. Eighty-one per cent of the pupils are in buildings having less than thirty square feet per pupil enrolled, and fifty-four per cent are in buildings having less than the fifteen square feet per pupil required in classrooms. This means that the majority of the pupils have less room on the playground than in the classroom.

6. Better provision in the way of gymnasiums, or playrooms, and playgrounds is needed. For elementary schools a minimum standard should be adopted of one gymnasium or large playroom for each thousand pupils, and fifty square feet of playground space per pupil. Standard equipment, including shower baths, should be provided. Every high school should have a play and athletic field under its control and a modern gymnasium for each six hundred pupils enrolled. Every pupil should have the opportunity to learn to swim.

7. The director of physical education should have three expert supervisors as assistants: one for secondary schools, one for elementary schools, and another for playground and recreational activities.

8. Instructors in physical education with successful teaching experience elsewhere should be brought into the Philadelphia schools. Graduates of different physical training schools should be appointed. The present tendency of "inbreeding" should be overcome.

9. Physical education in the elementary schools should be vitalized. The active interest of elementary school teachers in this program should be aroused. One instructor in physical education should be assigned to each elementary school.

10. A larger number of the pupils should be brought into after-school gymnasium and athletic activities.

11. The functions of the Bureau of Recreation should be taken over by the Bureau of Physical Education, with a supervisor in charge.

12. The budget of the Bureau of Physical Education should devote to elementary schools a larger share of the money expended.

13. Field days should be demonstrations of regular work in physical education rather than exhibitions of the work of specially trained groups.

14. More attention should be given to orthopedic exercises, occupational therapy, and corrective gymnastic exercises in the case of physically handicapped children reported by the medical inspectors for work of this kind.

15. Every school building, and particularly that of the School of Observation and Practice of the Normal School, should be an object lesson in healthful and sanitary living conditions.

ADDENDUM

Such a revision of the course of study in physiology and hygiene was begun ten months after this survey was made.

CHAPTER VIII

SCHOOL LIBRARIES

Present Need of School Libraries. Modern educational methods demand school libraries equipped with books, visual instruction and other material, administered by librarians who know the details of library work and also the problems of the schoolroom.

The project method of teaching, the socialized recitation, the increasing emphasis placed on securing information from various angles, by consulting many books—all these have in recent years given a new value and greater importance to the school library. The library has taken its place as the book laboratory of the school and as such has become an integral part of the school organization. It is here that all the interests of the school converge. A well organized library has not only a vital relation to every department and activity of the school, but it touches the community as well. Library habits should have their beginning and receive their direction here. These habits influence the self-education of the boys and girls in after-school years. No other laboratory of the school is used so widely or exerts such a far-reaching influence on every pupil and teacher as does the school library. Financially and educationally it is an economical investment.

To meet its obligations fairly, a city system of public education should supply different types of libraries to meet the needs of pupils and teachers. Library service should extend from the lowest grades of the elementary school, through the intermediate and high schools, and should amply provide the entire teaching body with the information and inspiration which come from the habitual use of a professional library. There should be classroom libraries, and wherever possible library rooms in the elementary schools, adequately equipped and administered libraries in junior and senior high schools, and a library to serve the many-sided needs of teachers in training and those in service.

The essentials of school library administration apply to:

1. Housing and equipment of the library.
2. Training and qualifications of the librarian.
3. Selection and care of books and other materials.
4. Systematic instruction in the use of books and library.
5. Proper classification and cataloguing of library material.
6. Centralization and distribution of various kinds of visual instruction materials, such as films, slides, stereoscopes, maps, charts, etc.

7. Systematic plan of classroom libraries for elementary schools.
8. Appropriations.
9. Unified system of supervision.

Library service must be adapted to the specific needs of the various types of schools. Each type of library service will be considered as a separate unit in this report which aims to show what the school libraries of Philadelphia are doing, what they are not doing, and what they should do to serve their respective group.

High School Libraries. The need and value of libraries in secondary schools have become so firmly established within recent years that they are considered a necessary part of the school organization. Their rapid increase has developed generally accepted standards for their administration. These have been outlined in detail by the Committee of the National Education Association on Library Organization and Equipment. Measured by these standards the following conditions were found in the eleven Philadelphia high schools:

Housing and Equipment.—1. Rooms. Ten of the eleven high schools have rooms either specially planned for a library or later set aside for a library room when the demand arose. The buildings erected during the last ten years have rooms centrally located and of easy access to classrooms.

With the exception of those in three schools, the library rooms are now used for classrooms, though books are still stored in them. The explanation was frequently made that the library room was needed for a classroom because of the crowded condition of the school buildings. This is an admission of a lack of appreciation of the relative importance of the library in the school organization.

These library rooms are still equipped with expensive shelving, with library furniture and equipment, and with books, although they are not used for purely library purposes. This investment is not producing any returns. It is a waste of money to allow valuable equipment to remain unused. Moreover, the work of the school is decidedly hampered because this material is not used.

2. **Equipment.** Eight of the high schools are provided with shelving, charging desks, and tables all made after the same plans. The *shelving* is too high and too deep, making an economic and convenient arrangement of books a difficult process. The sliding glass doors with which the shelves are provided are an unnecessary hindrance in a school library where books should be on open shelves, easily accessible.

The *charging desks* are too high for efficient work and in only a single library is the desk used for the purpose intended.

The *tables* are too long and wide for school library use. The standard size is 3 by 5 ft., seating six persons. The tables in these high schools are 4½ by 13 ft. They are cumbersome and, because so many pupils are grouped around one table, tend to become centers of disciplinary problems.

The *floors* in some of the library rooms are covered with rugs. These are not suitable for a school library which should be used by several hundred pupils a day. A cork or linoleum floor covering is more sanitary and deadens sound better.

The *minimum seating capacity* for high school libraries should be 5 to 10 per cent of the enrollment. Judged by this standard, only one library room which at present is not used for library purposes is large enough to meet the requirements.

Professionally Trained Librarians. Only one of the eleven schools has a professionally trained librarian and she has had only summer courses in library methods.*

At one school a teacher of English recently appointed, is delegated to library duty for full time at the salary of a teacher of English. She has had no training or experience whatever to fit her for the position to which she is appointed. This school formerly had a trained librarian and while it is commendable that an attempt is made to provide someone to serve as librarian, it is an unwise expenditure of money to select a teacher to do the work of a librarian when the same salary could pay a librarian who understands her work.

The remaining nine high schools are very inadequately served. In some schools teachers are assigned to supervise the library room in addition to their regular duties. Sometimes pupils are assigned to custodial duties in the library. In a few schools no library service of any kind is given. It is not economical to provide a room and spend money for books without at the same time insuring a wise expenditure and effective use of what is bought.

In one school not only are the bookcases locked, but the library room as well, and the custody of the library room is left with the janitor. In some schools library books are scattered throughout the school, each department having charge of those books most nearly relating to the subjects taught. Such an arrangement is wasteful and inefficient. The head of the Department should not be burdened with the details of library work. If he delegates the care of the library to an inexperienced person, books are either used and frequently lost or else are carefully guarded in locked cases and so become practically useless to the greatest number of pupils. Moreover, the books thus segregated if used at all,

* See Addendum.

serve a selected group when they should be available to all students and teachers.

Selection and Care of Books.—1. Book Selection. The selection of books for the high school library should be made with reference to—

a. *Laboratory and Classroom Needs*

In order to comply with modern courses of study a book laboratory is absolutely essential, especially in the English, History, and Social Science courses. Not only should pupils have access to the general reference books, but there should be a variety of source and textbooks available, during their study periods.

b. *Educational Guidance and Local Industrial, Commercial, and Community Interests*

To fit pupils to take their place in the social, industrial, and economic world, new courses of study are providing instruction in these various aspects of life. Pupils should be constantly referred to books, pamphlets, and periodicals giving the information they need.

c. *General Recreational and Cultural Needs of the Students*

Unless the school assumes the responsibility of guiding the recreational reading of pupils, much of that culture and refinement which comes from contact with noble and inspiring thoughts will be lost. Young people will read, and unless their recreational reading is guided and directed, there is danger that much of the careful work of the classroom will be counteracted by careless outside reading.

There is little attempt made in the Philadelphia High Schools to provide the three types of book needs as outlined above. The book selection is lamentably inadequate. The collections usually consist of:

Required reading material in sets, usually of textbook type. These are selected from the Supply List provided by the Board of Education.

Entire sets of standard authors. Often only one or two volumes of the set are of use or interest to high school pupils.

Gifts of books from various sources and of varying degrees of merit.

Books bought as needed, at request of teachers.

Practically all of the schools have one or two sets of encyclopaedias, but they are evidently but little used. There is notable absence of the standard reference books which should be available to pupils in a high school library. The selection of books is based usually upon the recommendation of some teacher, but no attempt is made by any one person to check up the actual need of such books in relation to the books on hand or the probable general use to be made of the books. There is a preponderance of books of interest to teachers rather than to pupils.

Bound volumes of government documents often sent by alumni of the schools, irrespective of the suitability of the subjects to high school needs, occupy valuable shelf space and do not in any way contribute to school work. Complete sets of books of individual authors and sets of compilations are frequently met with. Out of a collection of two or three thousand volumes, there are often only a few hundred really useful books.

2. **Periodicals and Pamphlets.** Periodicals listed in the *Reader's Guide to Periodical Literature* are a very valuable source of reference material. A generous selection of such periodicals should be in every school library and should be used frequently by the pupils in their class work. Some of the schools are fairly well supplied with periodicals, but no systematic effort is made for their use. Faculty members are permitted to borrow current numbers for their personal home reading and such copies of periodicals as are available are used mostly for recreational reading by the pupils.

There is no systematic binding of periodicals for future reference use and consequently much valuable reference material is lost through this negligence.

Pamphlets. State and Federal publications in pamphlet form often contain information which if preserved, properly classified and arranged for ready use, is of value in the high school library as reference material. Although many such pamphlets have been received no attempt to care properly for them, is made in most of the high schools of Philadelphia. They are allowed to accumulate on the shelves in unassorted piles.

3. **Classification and Cataloguing.** There are evidences in some of the schools that someone has at some time made the attempt to classify and catalogue the books according to standard methods. But as a rule such classification is now being ignored and a loose grouping of books is substituted or else there is no effort made to keep books of the same class together.

Aside from altogether inadequate shelf lists, there is no attempt to catalogue the books properly in any one of the eleven schools. A catalogue serves as a key which unlocks the library. Without it the library is a loose collection of almost useless books. This is inefficient and wasteful.

4. **Inventory.** Only a few of the libraries have an accession book or a shelf list. Both are necessary for an accurate accounting of the books belonging to the library. A shelf list is an index on cards arranged so that each book as it stands on the shelves is represented by a card in

the index. In addition to the various services of such an index, it is absolutely necessary if an accurate inventory of the library is taken. An inventory should be taken every year in order to discover losses and to check up all irregularities. The school libraries in Philadelphia apparently have not been inventoried in years and as a result no accurate account of the book supply is available.

An accession book in a library is as necessary as a bank book to the individual who has money in the bank. It should tell at a glance the total number of books in the library, indicate which have been discarded, and give information regarding the source through which every book was obtained and the price paid for it. At one or two of the libraries accession books were started, but nowhere has this method of book accounting been kept up in any systematic way. This is unbusiness-like and expensive. The withholding of books from the library is made easy and pupils are tempted to careless library practices.

Instruction in the Use of Books and the Library. Teachers and librarians generally agree that no subject taught in the high schools is of greater importance, or has more far-reaching influence both during school years and after graduation, than a course of instruction in the use of books and libraries. For the sake of the self-reliance that it will bring to their work, all high school pupils should know the tools of the library. If properly trained the pupils who drop out of school before entering college will continue to go to the "university of the people, the public library," after school days are over. For those pupils who do go to college, a knowledge of reference books and of the many aids helpful in quickly and accurately finding material, will be of greatest value. Training in library use should include:

1. The use of books as tools.
2. The use of books for educational guidance.
3. The use of books as a means of recreation, amusement, and inspiration.
4. The sense of responsibility in handling books as public property.
5. Resources of high school and public libraries.

At least five recitation periods per year should be given to graded instruction in the use of books and libraries. More should be demanded for pupils in the junior high school. The instruction should be given by the librarian and credited as a distinct requirement for graduation One or two periods of the English, History, Science, and possibly some other course, should be given to the library course, if it is not possible to arrange for it otherwise.

No formal instruction in the use of books and libraries is given in any of the Philadelphia high schools, except such incidental instruction as some of the teachers of English may give in connection with their work.

Annual Appropriation. The library should receive an annual appropriation of sufficient amount to provide means for the necessary correlation with all other departments. The maintenance of the library should not depend upon incidental sources of money, such as school entertainments. Having justified itself as an effective element in education, it should be supported precisely as other departments are.

Funds for maintenance should provide for additional books, periodicals, binding and mending, replacement of worn-out books, general supplies, for new equipment, and for handling materials borrowed from the public library agencies. A small sum should be set aside for Library of Congress cards. These are printed catalogue cards, containing full information entered according to established standards of cataloguing. They are sold to libraries for a small charge and save much time in cataloguing as well as providing an attractive, useful card catalogue.

A minimum annual appropriation per pupil should be determined upon for books, pictures, magazines, and other library material. For books alone a minimum of $1.00 a year per pupil is needed. Not less than $75 a year for magazines is necessary.

There is no systematic plan of providing books and supplies for the high school libraries of Philadelphia. Certain titles required by the course of study are listed in the Supply List of Books and may be requisitioned as other school supplies. Sets of such books are supplied up to a certain limit. Through the enterprise of graduating classes some schools have acquired books, but in general very few real library books have been supplied to the high school libraries, exclusive of sets of books for required reading.

Junior High School Libraries. The arguments advanced for senior high schools apply with equal if not greater force to the junior high schools.

The Junior High School must have a school library if it expects to accomplish its manifold aims. The courses of study in English, History, Social Studies, Health Education, etc., all require the use of many books. These must be classified, catalogued, and a charging system must be provided in order to make of a collection of books a working library.

In point of location, size of reading room, furniture and equipment the attainable standards as outlined for the library in the senior high school should be followed. The character of books selected and the

service expected from the librarian, however, should be sharply differentiated from those of the senior high school.

The Librarian. The librarian should not only have training and experience in the technical knowledge required of a high school librarian, but she should also be a student of children and adolescent psychology, for the pupils who come to her are boys and girls in the seventh, eighth, and ninth grades and are still children, even though they like to think of themselves as more mature.

To bring about the best results in the curriculum the library should be very closely adapted to the varied and extensive interests which the courses of study in the junior high school demand. It does not require the high degree of intensive study, concentration, and application necessary in the senior high school library, but it does require many of the features of library work for children of intermediate school age. Many of the methods of the elementary school library, and of children's rooms in public libraries, should be used to stimulate interest in books. The librarian, therefore, should, in addition to her technical training, have training and experience in children's work and should be a normal school graduate with college training, or a college graduate with special courses in education.

Instruction in the Use of Books. It is specially important in the junior high school that pupils be given systematic instruction in the use of books and libraries as many pupils leave school and are later largely dependent upon books, in their self-education. The pupils who know how to use books and feel at home in a library and who have formed the habit of turning to the printed page for information have gained a valuable asset. They may forget many facts learned during their school years, but they can easily find them again if they have learned how to use books and libraries.

The course in Use of Books and Libraries should be adapted to the specific needs of the junior high school. It should be given by the librarian and credited as a distinct requirement for graduation. The lessons should be simple, well worked out, confined to a somewhat limited field, but concrete and progressive, with the idea of making the use of books natural and easy and looking forward to the future needs of the pupils whether these needs lie in the senior high school or in use outside of school.

Appropriation. In view of the sharp increase in the cost of books, a minimum appropriation of one dollar per pupil per year for new books, replacement copies, and rebinding is hardly adequate to meet the demands of an efficient library in the junior high school to be used by every pupil and the faculty. It should be remembered that in addition

to the necessary reference material, books of general recreational and cultural nature are required in the junior high school if the importance of developing good taste and standards in literature is duly recognized at this habit-forming period of the pupil's development.

Holmes Junior High School. There is at present only one junior high school in Philadelphia, the Holmes Junior High School. In it there is no library and no librarian. All of the 46 rooms are used for classroom purposes. It is planned to utilize a part of an upper hall adjoining the assembly hall for a library. This space would be altogether inadequate in supplying even the minimum seating capacity. Pupils would have to pass through the library at the close of every period in order to reach the assembly room, and there could be none of the features so desirable in a school library, such as quiet, comfort, refinement, and library atmosphere.

The Head of the English Department is giving much time and attention not only in directing the reading of the pupils, but in performing many duties of a librarian in addition to her regular work. Although the efforts of this teacher are most commendable, the work should be done by a librarian who could give all her time and attention to library work even though there is as yet no library room. The demands on a librarian in a junior high school are even greater than those of a senior high school since closer supervision and more individual guidance are necessary. The library should be used by at least ten per cent of the total enrollment during every period of the day. To serve a hundred or more pupils adequately during each class period requires the full time of a librarian and an assistant. A teacher having her own work which occupies most of her time cannot possibly serve as librarian too, even approximately.

The librarian should outline the plans for the school library which must be established eventually, select the books in coöperation with the faculty, classify and catalogue them, and provide a charging system. She should give the necessary help to pupils in providing reference material and put in operation many of the methods in directing the reading of pupils, such as lists, bulletins, reading clubs, etc. She should also give the instruction in the use of books and libraries. All of these phases of library work can be helpfully begun, even before a room is provided.

Concentration School Libraries. There are a number of schools used as concentration centers for pupils of the seventh and eighth grades. While these are not fully functioning as junior high schools, the library service for these schools should approach as nearly as possible the plan as outlined for the Holmes Junior High School.

RECOMMENDATIONS

Trained and experienced librarians for each junior and senior high school should be appointed.

Library rooms should be used for *library purposes* in those schools where they exist. The rearrangement of the school roster in schools which now have no library in order to secure at least one classroom unit to be furnished and equipped for library purposes.

Uniform courses of instruction in the use of books and libraries, planned to meet the specific needs of the junior and senior high schools should be given.

An appropriation should be made of at least one dollar per pupil annually for books and other library material.

Unified supervision of school libraries should be provided for by the appointment of a School Library Supervisor who shall coördinate and supervise the library service in the junior and senior high schools as well as that of the elementary schools.

Elementary School Libraries. It is quite generally accepted that every high school should have a library in order to meet the requirements of modern educational ideals. It is equally important that pupils in the elementary grades have access to library books. But this fact has not yet become generally recognized.

School people, as a rule, have not yet become alive to the importance of the elementary school library as a school project. The service is usually rendered more or less adequately by the public library of the community. Any discussion, therefore, of library service in elementary schools must take cognizance of this fact.

In most of the larger cities, collections of books of general reading for elementary schools are furnished by the public library to schools at a distance from library centers. This is the case in Cleveland, Pittsburgh, Detroit, etc. These library centers or stations are really small branches of the Main or Central Library. They supply the recreational reading of pupils and are established for the convenience of children who cannot easily secure their books from the larger centers. A library assistant from the Main Library comes at regular times to issue the books. The books are usually well selected, but the service is apt to be limited in time allotment and in the number of books supplied. The contact between librarian and pupils is slight. There can be very little guidance or direction of the pupils' reading by a comparative stranger who comes for only an hour or two once a week and has to spend most of her efforts in the routine of issuing books.

A better plan is to provide classroom libraries composed of thirty to fifty volumes for each classroom. This is done in nearly all large cities,

even those supplying library stations, usually by the public library, as in Pittsburgh, Louisville, etc. Sometimes the provision of classroom libraries is the joint project of the public library and the public school, as in Cleveland, Buffalo, etc. In Rochester, New York, and in Youngstown, Ohio, the Board of Education owns the classroom library but the Public Library administers it and assumes its supervision. To secure the best results the Board of Education should not only own the classroom libraries but should administer and supervise them directly, rather than divide that responsibility with another organization.

The average cost of an adequate classroom library does not exceed fifty dollars. The value of such an investment cannot be measured in terms of dollars and cents, but it is evident that no other investment of school funds brings greater dividends, when it is remembered that these books enrich and develop the plastic minds of the younger pupils at a time when their reading habits are being formed.

Lists of books suggested for classroom libraries are supplied by the State Department of Public Instruction.

Ideal library service for elementary schools is obtained not by classroom libraries but by a library room in charge of a children's librarian who knows the reading tastes and abilities of children in the grades, and who has a thorough knowledge and appreciation of children's literature, so that she may fit the right book to the right child at the right time. A few cities now provide such library service to pupils in the elementary schools, notably Cleveland, Ohio. To provide a library room where projects can be worked out in a pleasing environment, where pupils are helped and guided by a competent librarian who knows the *school* side of library work, is being recognized as both practical and necessary in the equipment of progressive elementary schools.

Philadelphia, unlike most larger cities, has no organized city-wide plan for supplying the elementary schools with library books issued by the Board of Education or by the Free Library. A few, not more than a dozen, classroom libraries were sent to schools last year by the Free Library, but the schools as a whole are not served with either library stations or classroom libraries.

The Board of Education of Philadelphia supplies textbooks and supplementary readers for the elementary schools, but provides practically no reference books or books of general reading. A printed catalogue of text and supplementary books furnished, is issued by the Board of Education. From this, principals make their selection. Each school is allowed a definite quota every year. In the last two years this quota has been greatly reduced, so that in many cases it has barely sufficed to provide replacement copies for discarded books. A few titles of general literature such as children would enjoy reading, appear in the graded

lists of the catalogue, but most of the titles are of the supplementary reader type, well suited for classroom purposes, but hardly of the kind which children would read for pleasure and which would lay a foundation for lasting reading habits. At best, therefore, the pupils in the elementary school have access to very few *library* books. The more enterprising of the older pupils go to the nearest branch of the Public Library, which is often at a considerable distance from the school, in order to get the books they want and should have.

Modern methods of teaching require the use of many books even in the lower grades of the elementary schools. As soon as the mechanics of reading are mastered, pupils should have, easily accessible, a variety of books of general reading for classroom and home use. Right reading habits cannot be encouraged too early. The value of supplying carefully chosen books of general reading to all pupils in the grades, is being stressed by progressive educators. A book laboratory where teachers may take classes for reading and story hours and where they may lay the foundation for library habits, is as necessary in the graded, as in the high school.

RECOMMENDATIONS

Because of the crowded condition of so many schools in Philadelphia, book laboratories in library rooms for all elementary schools, will probably not be feasible at this time. However, as new school buildings are erected, provision for library rooms should certainly be made for elementary as well as for high schools.

To provide for the immediate needs of adequate library service, it is recommended that three types of book collections be supplied for each elementary school by the Board of Education, in addition to the text and supplementary books now furnished:

a. *Reference books*, including an encyclopaedia, unabridged dictionary, atlas, and such indexed informational books as will provide reference material in connection with the subjects studied. The State Department of Public Instruction supplies suggestive lists of such basic reference books.

b. *Books for teachers*, suggested for their use in the course of study, as, for instance, books on story telling, collections of poetry, source books in history, etc. This collection need not be large, from twenty to forty titles is sufficient. It should be kept with the reference books in the school library or in some central place where it would be available to *all* the teachers in the building.

c. *Classroom libraries* of from forty to fifty volumes for every grade in the elementary schools. The books in these collections should be for the general reading of pupils and should be so selected and graded that each set will represent the best books suited to the mental development of the pupil in that particular grade. These books are intended for home reading for which school credits may be given.

Administration of school libraries should be in charge of the School Library Supervisor whose duties would be:

a. To select the three types of books suggested above in coöperation with committees of teachers and librarians.
b. To grade the books for the classroom libraries so that each collection would be a unit and the units a connected series of books carefully adapted to the mental development of pupils.
c. To compile statistics and reports of the use made of the books.
d. To stimulate more and better reading by meeting with the faculties of schools, sending out of circular letters, addressing local educational gatherings, visiting schools, etc.

Libraries for Teachers. Administrative departments of public education, especially in the larger cities, are recognizing the fact that teachers in training must have ready access to a library, where they may find the books which they need while in training and where they may receive instruction in the use of books, in children's literature, and in library practices.

Teachers in service, too, must have access to books which will help them in their teaching and give them that information and inspiration which a teacher must have if she would keep abreast with progressive educational ideals. Philadelphia offers library service to teachers in training and those in service, through two libraries, the Normal School and the Pedagogical Libraries. Both libraries supply practically the same kind of books and other library material.

Normal Training School Library. The Normal School is the strategic center of the educational system, the Normal School library more than any other school library should be the dynamic center of the school organization. It is here that the prospective teachers must form their conception of the possibilities of the library in offering the many-sided opportunities to enrich the courses of study.

The Normal School which does not provide adequate, satisfying library service resulting in teachers trained to know the true value and

use of libraries in education, must be considered deficient and failing in its highest usefulness to its students.

Library Room. The Library Room of the Philadelphia Normal Training School is centrally located, being on the second floor, within easy access of teachers and pupils. It is, however, too small to meet the needs. There should be seating capacity for at least 75 pupils. There is now room for only 36 and this is secured at the expense of the necessary aisle space between tables. The room is too crowded with tables, chairs, and floor cases, to permit of carrying on satisfactory work. In addition to a larger reference room there should be an adjoining work room where all the processes of preparing books for use and keeping them in repair may be carried on, and for storing such material as should be easily accessible but which has no place in the library room. Because a very important feature of the library work in a Normal School is the instruction of classes in the use of books and libraries, there should be an adjoining classroom so that the regular work in the library room proper may be conducted without interruption. The present furnishings and equipment are unsuitable. The shelves are too high and too deep, the glass doors are a hindrance and do not serve as a protection. The tables are too long, the charging desk too small and not adapted to library needs.

There is not sufficient provision for housing visual instruction material. At least three more filing cabinets are needed to accommodate the clipping collection which is so necessary a part of a school reference library.

Model Children's Library. An important function of the Normal School is the training of prospective teachers in children's literature. A children's library room near the general reading and reference room, equipped with tables and chairs for a class of from thirty-five to forty children, should be a part of the Normal School library. A collection of the best books for children should be shelved here. The room should be light, airy and attractive, a place of comfort and refinement. The purpose of a model children's library in a Normal School is to provide a suitable workshop for the student teachers, where they may observe demonstration lessons to pupils of the Practice School, or graded instruction in the use of books as tools, lessons in the use of the catalogue and other library aids. Here, all methods in guiding children's reading through story hours and book talks should be demonstrated.

Librarian. The Philadelphia Normal School is fortunate in its librarian. She has, what is so necessary in a Normal School librarian, the training and experience of the teacher as well as that of the librarian. She has splendidly developed the most important service of the Normal

School librarian, that of giving instruction in the use of the library. This she does for several periods each day, giving instruction to the Normal School students both junior and senior, and also to classes of pupils brought over from the Practice School. Since it is manifestly impossible to do this and attend to the details of the library administration, it follows that the library is not adequately managed. Important records are not kept, details which require time and attention are not attended to, and the service to the users of the library is insufficient. This should be rectified by the appointment of a full-time, trained assistant who could assume many of these responsibilities, such as classifying and cataloguing books, etc., and so leave the librarian free to do the more important work which by training and experience she is well qualified to do. Because of her unusual ability as a teacher of library practice and use of books, the librarian might most profitably spend some time in giving demonstration lessons to groups of teachers from the elementary schools at their educational gatherings, so that the training which the more recent graduates of the school have received, might be extended also to the teachers who graduated from the Normal School before instruction in library methods was taught.

Books: Selection, Classifying, Cataloguing, and Binding. There are approximately 9000 volumes in the Normal School Library. An accession book is kept, but no inventory has ever been taken, and there is no record of lost or discarded books. Many of the books on the shelves are of little value in a Normal School library. These should be removed to make room for the live titles remaining and the new books to be added. The collection needs building up in books on teaching methods, pedagogy, and psychology, especially the more modern books on these subjects which should be readily available to the students.

Periodicals. A Normal School Library should have from thirty to forty of the leading periodicals on file for ready reference. The Readers' Guide to Periodical Literature is absolutely essential in order to make available the wealth of reference material of special interest to teachers. At least twenty of the most valuable periodicals should be bound for future reference use. The binding of periodicals has been neglected in recent years.

Instruction in the Use of Books and Libraries. Nowhere else is instruction in the use of books so essential as in the Normal School. The students need it for their own immediate use but even more do they need to know how to pass that information on to their pupils. Only one lesson a week for the two terms of the junior year is now given. This is not enough to give students that working knowledge of books as tools, which every teacher should have. This instruction

should be given by the librarian and should receive credit equal to that of other subjects in the curriculum. A course of at least twelve lessons on the use of books and the tools of a library should be given to the entering class. A course in children's literature of not less than twenty lessons should be required of every student.

Pedagogical Library. Teachers in service need the stimulation which comes from contact with progressive thought on the many-sided problems of modern education. To a large extent, this can best be secured through books and periodicals dealing with the various phases of education. In addition to their professional reading, teachers should have access to a collection of text and supplementary books for examination and review. There should also be a centralized source of visual instruction material. All these should be organized in a library centrally located, and housed in a building where other educational interests would attract teachers.

The Board of Education of Philadelphia has for nearly forty years maintained a Pedagogical Library. This is housed in the Department of Superintendence in the Board of Education Building. The aim of the library is to serve the superintendents and the members of the Board of Education as well as the teachers of the high and elementary public schools of the city.

Books and Other Library Material. The plan from the beginning was to stress the quality rather than the quantity of books. This policy seems to have been adhered to consistently. The library consists largely of pedagogical books but standard works in all classes of knowledge are represented. Within the last few years, books that have passed their usefulness have been withdrawn. They were superseded by up-to-date publications. This resulted in a well balanced collection of useful books. These are supplemented by government publications, reports of educational bodies, and by valuable pamphlet material of all kinds.

Periodicals. Fifty-six periodicals of interest to teachers and school administrators are on file and are serving as excellent reference sources. The more important of these are bound for future reference use.

Vertical File. A vertical file of clippings and loose-leaf reference material is maintained.

Lantern Slides. An excellent loan collection of 1,761 lantern slides is kept in constant circulation among the schools.

Model Collection of Textbooks. *A model collection of textbooks* has been established. This not only serves the purpose of providing sample textbooks for ready reference on the various phases of every

subject covered by the course of study, but it is also planned to save the time and energy of principals and teachers who otherwise would have to depend upon representatives of publishing firms for the opportunity to examine textbooks. The textbook collection is shelved in an adjoining room which provides the opportunity for the meeting of groups of teachers for conference on the evaluation of texts.

Librarian. The Pedagogical Library is unusually fortunate in its librarian and her assistant. It is due to the vision and the enterprise of the librarian that the Pedagogical Library ranks high among the libraries of its kind in the country.

Use of Library. The test of any library is the use that is made of it. The Pedagogical Library is used by superintendents, supervisors, principals, and teachers of the city. The librarians are kept busy answering questions on topics of interest to the teaching force of the city, looking up references, attending to the details of issuing books, periodicals, and visual instruction material. With all these heavy demands upon their time, the librarians have classified and catalogued the library according to approved modern methods.

The selection of books and of visual and other instruction material should be the joint problem of the librarian and committees representing the various teaching interests of the city. There is now no system of securing systematic and regular suggestions from the teaching body in the very important matter of keeping the library up-to-date in its supply of books, etc. The value of a Pedagogical Library depends very largely upon the general coöperation of the teachers. While many individual teachers are availing themselves of the opportunities offered and are coöperating by suggestion and advice, it cannot be said that the teaching body as a whole is making full use of the privileges provided for them. This is not the fault of the librarian, who, by her personal efforts and through the bulletins, has tried to acquaint the teachers with the resources of the library. There seems to be a need of greater and more widespread recognition (on the part of the supervising force) of the function of a Pedagogical Library.

The efforts of the librarian to popularize the library are supplemented by the publication and wide distribution among the schools of bulletins of information pertaining to the library. These are written by the librarian in an original, attention-compelling style and serve as excellent advertising media. They are found on bulletin boards in the schools all over the city and evidently are read with interest. Some of these bulletins contain lists of books on special subjects, or timely notices of interesting publications, and so bring the resources of the library to the attention of the schools.

Inadequate Appropriation. The *appropriation* for books and visual instruction material is entirely inadequate when the book needs of Philadelphia's 7,000 teachers are considered. With the high cost of books, the present appropriation is barely sufficient to maintain the library. It does not provide for other instruction material so necessary in modern teaching methods, such as music records, films, stereoscopes, stereographs, and museum material which should be supplied to teachers. Until a school museum is established, the Pedagogical Library is the logical organization to secure the necessary material to classify and catalogue it and keep it in constant circulation.

RECOMMENDATIONS

1. To secure greater economic and more efficient library service for teachers in training and those in service, the Pedagogical and Normal Training School libraries should be combined.

2. The Normal Training School is the logical location for the library. Because of its location, but even more because the normal school of a community should be the educational center for teachers in service as well as those in training, the library should be established in the Normal Training School building.

3. To provide adequate service to student teachers and also to teachers in service in the Teachers' Library, there should be space for:

a. Reading and periodical room accommodating at least 75 readers.
b. Reference room accommodating at least 25 readers.
c. Children's library accommodating at least 40 readers.
d. Library classroom equipped with at least 50 seats.
e. Cataloguing work and store room, about 200 square feet.
f. Librarian's office, about 180 square feet.

There should be shelving space for at least 20,000 volumes to accommodate the books for:

a. General circulation and assigned reading	15,000
b. Special reference including bound periodicals	3,000
c. Children's books	2,000

4. A staff of at least four librarians is required as follows:

a. Librarian who shall have the status of a head of department and shall be responsible for the administration of the Teachers' Library.
b. Reference and children's librarian.
c. Cataloguer.
d. Loan desk assistant.

RECAPITULATION OF RECOMMENDATIONS

High School Libraries

Trained and experienced librarians should be appointed for each junior and senior high school.

The library rooms should be used for *library purposes* in those schools where they exist. The rearrangement of the school roster in schools which now have no library in order to secure at least one classroom unit to be furnished and equipped for library purposes.

Uniform courses of instruction in the use of books and libraries should be given.

An appropriation should be made of at least one dollar per pupil annually for books and other library material.

Unified supervision of school libraries should be provided for by the appointment of a School Library Supervisor.

Elementary Schools

Library room should be provided in new school buildings to be erected, and in other buildings where space permits a classroom should be equipped for a library.

Three types of book collections should be provided for each elementary school:

a. Reference books.
b. Books for teachers referred to in courses of study.
c. Classroom libraries of from forty to fifty volumes for every grade.

There should be supervision by School Library Supervisor who shall select and grade books, furnish statistics and reports, and coördinate all the library activities of the elementary schools.

Libraries for Teachers

The Pedagogical and Normal School libraries should be combined to secure greater economy and efficiency.

The Teachers' Library should be located in the Normal Training School as this should be the professional center of teachers in training and those in service.

Adequate space should be provided for necessary library activities. There should be:

Reading and periodical room
Reference room
Children's library
Classroom for library instruction

Room for cataloguing work and for storage
Librarian's office
Shelving space for at least 20,000 volumes.

A staff of four librarians should be secured: (a) Head Librarian, (b) Reference and children's librarian, (c) Cataloguer, (d) Loan desk assistant.

Compliance with the minimum attainable standards outlined in this report should result in adequate library service for all pupils and teachers in the public schools of Philadelphia.

ADDENDUM

Three professionally trained librarians have been appointed since this survey was made.

CHAPTER IX

MATHEMATICS

Arithmetic in Elementary Schools.—General Statement. The arithmetic work of the Elementary School through the sixth grade has for its purpose the acquisition by the pupil of fundamental number facts and processes: learning to control the "machinery" of number work. In the later grades of the elementary schools, and to some extent in the lower grades, simultaneously with the acquisition of control of the "machinery" of arithmetic, the pupil applies this "machinery" to the solution of problems involving reasoning on his part.

In recent years, standardized tests have been devised for the purpose of measuring pupils' ability in various school subjects. The standardization of these tests is based upon experience with large numbers of pupils. The work done by pupils in one school or system of schools, may be compared with the work of pupils in another school or system, on the basis of the scores made in these tests.

In the course of the present survey of the schools of Philadelphia, two tests were given in the arithmetic classes of grades 3A to 8B inclusive: the Cleveland Arithmetic Tests and the Monroe Reasoning Tests. These tests were given, and the results scored and tabulated, under the direction of Professors Updegraff and King, of the University of Pennsylvania.

The Cleveland Arithmetic Tests

These tests include a number of different forms of each of the four fundamental operations, and may be looked upon as furnishing an inventory of the pupils' knowledge of the fundamentals of arithmetic.

Test A is a test of the addition of one-place numbers. These numbers are printed one above the other, and the pupil is required to add the pairs and to write the results as fast as possible for 30 seconds.

As shown in Table 1, the median score for 4B pupils is 13.3; for 5A pupils, 14.1, and so on.

Test B involves subtracting one-place numbers from one- and two-place numbers.

Test C has to do with the multiplication of one-place numbers by one-place numbers.

Test D deals with division of one- and two-place numbers by one-place numbers.

Test E involves the addition of short single columns of figures.

Test F consists of the subtraction of three-place numbers from three- and four-place numbers.

Test G requires multiplication of four-place numbers by one-place numbers, differing from Test C in that there is "carrying" to complicate the process.

Test H deals with addition and subtraction of simple fractions having like denominators.

Test I is the division of five-place numbers by one-place numbers, differing from Test D in that the process is complicated by the necessity for performing subtractions and carrying figures forward to form new dividends.

Test J is a test in adding long columns of single figures, involving not merely the knowledge of the process of addition dealt with in Test E, but also a long span of attention.

Test K is a test in long division; three-place and four-place numbers divided by two-place numbers.

Test L is the multiplication of four-place numbers by two-place numbers.

Test M requires the addition of five four-place numbers, involving the process of "carrying" as well as the simple addition involved in Test E.

Test N involves division of five-place numbers by two-place numbers.

Test O is the application of the four fundamental operations to simple fractions, involving reduction to a common denominator when additions and subtractions are to be performed.

THE CLEVELAND ARITHMETIC TESTS

DEVISED BY CLEVELAND SURVEY STAFF

Below are given the exercises entering into the various tests. It will be noted that in each test there are more exercises than could be worked by any pupil in the time allowed.

SET A—Addition

Ats. .....
Rts. .....

1	6	9	0	4	1	7	9	3	2	1	3	6
2	6	5	1	2	3	7	6	0	4	5	8	9
0	3	8	9	7	8	2	1	4	8	0	2	3
7	2	1	9	6	0	5	6	7	9	5	7	1
4	7	0	3	1	2	5	6	7	5	8	6	9
6	9	8	5	4	9	8	0	2	1	3	5	0
4	2	9	7	4	5	7	4	8	0	3	9	2
3	2	3	8	0	2	1	9	6	0	4	1	8
5	0	6	2	4	5	1	6	3	7	9	0	4
7	4	3	1	8	9	0	2	3	4	8	6	5

SET B—Subtraction

Ats. .....
Rts. .....

9	7	11	8	12	1	9	13	4	12
9	3	6	1	3	0	7	8	3	6
8	11	12	5	10	6	11	15	10	12
0	9	7	1	2	0	7	8	9	4
2	7	13	3	10	1	6	15	4	8
1	5	7	2	5	1	3	9	2	3
4	10	13	10	9	5	8	17	6	11
4	7	5	1	4	5	6	9	4	8
5	12	15	5	16	7	8	16	9	11
0	9	6	3	8	0	5	7	1	4

SET C—Multiplication

Ats. .....
Rts. .....

3	4	9	0	5	4	2	7	4	9
2	7	8	2	6	1	9	6	0	5
9	5	4	7	6	2	3	9	0	7
1	2	8	0	5	1	3	6	5	4
1	2	7	0	8	7	3	9	2	4
6	8	7	6	3	1	8	9	0	3
1	4	8	0	4	1	6	8	0	9
5	4	9	3	5	4	2	8	7	3
1	3	6	0	3	2	6	7	5	4
7	4	8	0	9	2	3	9	5	6

SET D—Division

Ats. .....
Rts. .....

3)9	4)32	6)36	2)0	7)28	9)9	3)21
6)48	1)1	5)10	2)6	4)24	7)63	6)0
8)32	1)8	5)30	8)72	1)0	9)36	1)7
2)10	7)42	1)1	6)18	3)6	4)20	7)49
1)3	2)8	6)6	3)27	8)64	1)2	4)16
5)0	3)24	9)63	2)4	8)24	7)7	2)18
6)42	3)0	7)21	4)4	3)15	9)81	7)0

SET E—Addition

Ats. .....
Rts. .....

5	2	9	2	6	1	4	9
2	8	8	8	3	4	6	7
2	8	0	5	4	2	5	1
0	5	7	0	8	5	3	5
4	1	6	6	8	4	4	3
6	2	6	8	5	4	1	3
7	7	2	5	9	0	4	7
8	3	3	1	6	8	1	2
5	4	9	3	3	5	8	9
5	1	3	8	8	5	4	6

SET F—Subtraction

Ats. .....
Rts. .....

616	1248	1365	1092	716
456	709	618	472	344
1267	1335	707	816	1157
509	419	277	335	908
1355	908	519	1236	1344
616	258	324	908	818
1009	768	1269	615	854
269	295	772	527	286

SET G—Multiplication

Ats. .....
Rts. .....

2345	9735	8642	6789	2345
2	5	9	2	6
9735	2468	6789	3579	2468
9	3	6	3	7
5432	9876	8642	3579	9876
4	8	5	7	4
5432	3689	2457	9863	7542
8	5	6	4	7

SET H—Fractions

Ats. .....
Rts. .....

$\frac{3}{5}+\frac{1}{5}=$	$\frac{6}{9}-\frac{4}{9}=$	$\frac{4}{9}+\frac{1}{9}=$	$\frac{8}{9}-\frac{7}{9}=$
$\frac{1}{9}+\frac{5}{9}=$	$\frac{3}{7}-\frac{1}{7}=$	$\frac{1}{7}+\frac{4}{7}=$	$\frac{6}{7}-\frac{2}{7}=$
$\frac{2}{9}+\frac{4}{9}=$	$\frac{4}{5}-\frac{1}{5}=$	$\frac{5}{8}+\frac{1}{8}=$	$\frac{6}{9}-\frac{5}{9}=$
$\frac{7}{9}+\frac{1}{9}=$	$\frac{5}{7}-\frac{2}{7}=$	$\frac{5}{9}+\frac{2}{9}=$	$\frac{8}{9}-\frac{1}{9}=$
$\frac{1}{8}+\frac{3}{8}=$	$\frac{6}{8}-\frac{1}{8}=$	$\frac{2}{7}+\frac{1}{7}=$	$\frac{5}{9}-\frac{4}{9}=$
$\frac{2}{9}+\frac{6}{9}=$	$\frac{4}{8}-\frac{3}{8}=$	$\frac{4}{7}+\frac{2}{7}=$	$\frac{7}{9}-\frac{5}{9}=$

SET I—Division

Ats. .....
Rts. .....

$4\overline{)55424}$	$7\overline{)65982}$	$2\overline{)58748}$	$5\overline{)41780}$
$9\overline{)98604}$	$6\overline{)57432}$	$3\overline{)82689}$	$6\overline{)83184}$
$8\overline{)51496}$	$9\overline{)75933}$	$8\overline{)87856}$	$4\overline{)38968}$

SET J—Addition

Ats. .....
Rts. .....

7	9	4	7	2	9	6	7	7	8	9	4	3	2
5	2	5	1	9	6	9	1	8	0	5	3	1	1
4	4	8	9	4	2	6	5	5	7	3	7	7	6
2	8	1	4	8	4	7	1	4	1	4	7	6	6
6	2	4	3	5	7	0	4	1	8	6	0	9	1
0	7	8	2	1	1	4	6	8	5	2	2	6	8
5	5	5	8	5	3	3	5	2	1	3	9	3	6
1	3	1	5	2	9	7	3	1	3	9	5	4	9
8	6	3	2	4	2	1	3	3	7	2	6	5	7
3	1	9	7	3	3	6	7	9	4	2	3	4	5
2	4	6	7	6	8	0	6	8	9	8	4	2	2
9	8	3	1	7	5	6	1	4	4	5	8	9	2
9	8	5	9	6	5	6	7	5	4	6	8	9	4

SET K—Division

Ats. .....
Rts. .....

21)273	52)1768	41)779	22)462	31)837
42)966	23)483	72)1656	81)972	73)1679
21)294	62)1984	31)527	52)2184	41)984
32)384	51)2397	82)1968	71)3692	22)484
41)1681	33)693	61)1586	53)1166	31)496

SET L—Multiplication

Ats. .....
Rts. .....

8246	3597	5739	2648
29	73	85	46
4268	7593	6428	8563
37	64	58	207

SET M—Addition

Ats. .....
Rts. .....

7493	8937	8625	2123	5142	3691
9016	6345	4091	1679	0376	4526
6487	2783	3844	5555	4955	7479
7591	4883	8697	6331	9314	2087
6166	1341	7314	6808	5507	8165
5226	9149	6268	9397	7337	8243
2883	8467	7725	6158	2674	6429
2584	0251	8331	3732	9669	9298
0058	7535	5493	4641	5114	7404
2398	5223	3918	7919	8154	2575

SET N—Division

Ats. .....
Rts. .....

67)32763	48)28464	97)36084	59)29382
78)69888	88)34496	69)40296	38)26562

SET O—FRACTIONS

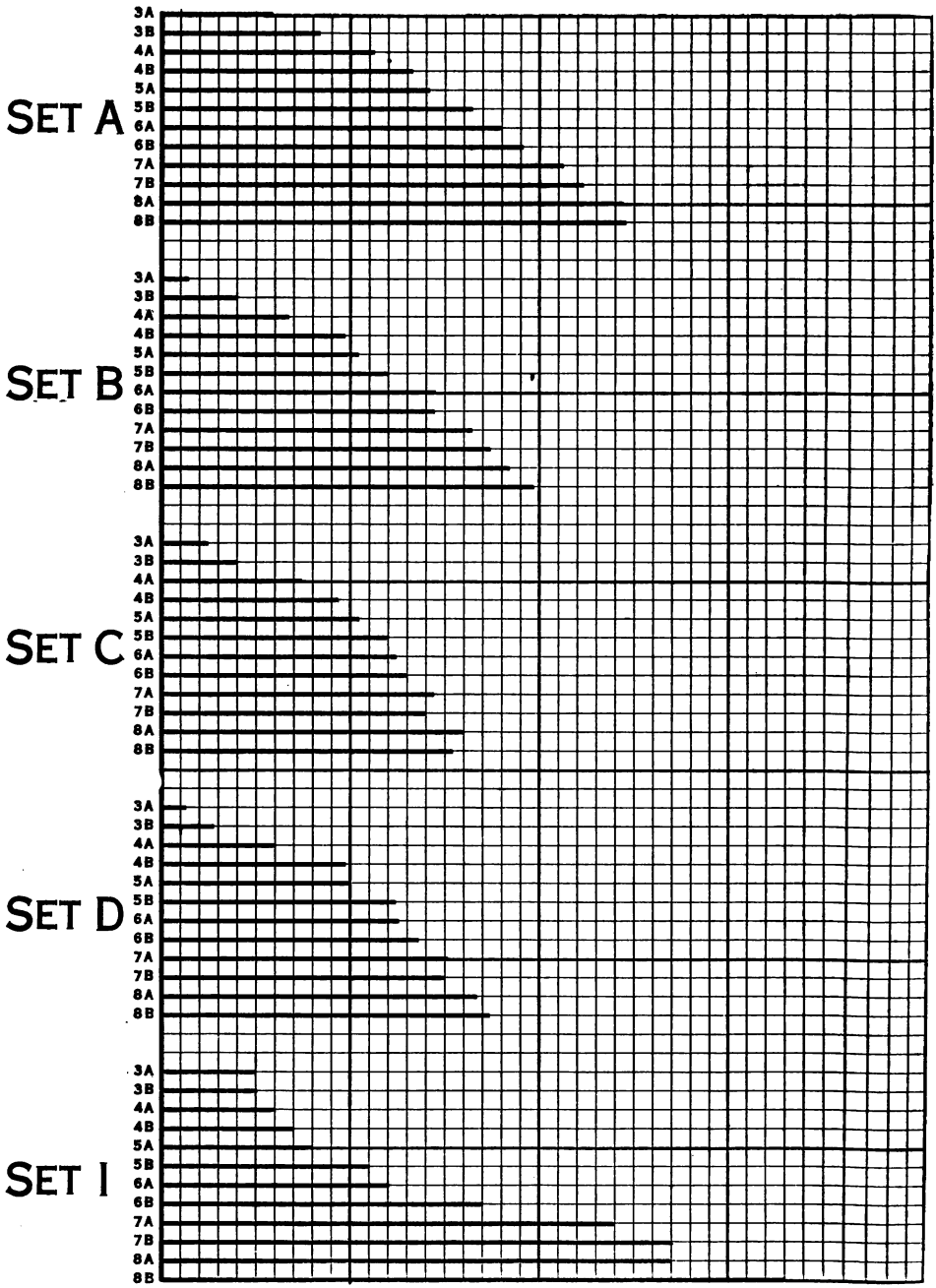
Ats. .....
Rts. .....

$\frac{11}{15}+\frac{1}{6}=$	$\frac{9}{14}-\frac{1}{4}=$	$\frac{3}{5}\times\frac{5}{6}=$
$\frac{5}{6}-\frac{2}{21}=$	$\frac{5}{6}\times\frac{19}{20}=$	$\frac{11}{12}\div\frac{5}{8}=$
$\frac{1}{6}\times\frac{3}{10}=$	$\frac{5}{6}\div\frac{11}{15}=$	$\frac{5}{12}+\frac{2}{8}=$
$\frac{20}{21}\div\frac{1}{6}=$	$\frac{3}{4}+\frac{3}{18}=$	$\frac{3}{8}-\frac{3}{10}=$

Results of the Cleveland Arithmetic Tests.—The median scores made by the various grades are given in Table 1. From this table the changes in score from grade to grade may be read off for each of the tests. It should be noted that correct answers only were taken account of in scoring the papers for all the tests; no attention was paid to examples attempted but incorrectly worked.

TABLE 1.—MEDIAN SCORES MADE BY THE VARIOUS GRADES IN THE CLEVELAND ARITHMETIC TESTS

Grade.	Test.														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
3A	5.8	1.4	1.7	1.2	2.2	0.7	0.8	0.5	0.5	1.1	0.5	0.5	0.7	0.5	0.5
3B	8.3	4.0	4.0	2.9	2.6	1.1	1.2	0.5	0.5	1.5	0.5	0.6	1.0	0.5	0.5
4A	11.1	6.8	7.5	6.0	3.0	2.5	2.3	0.5	0.6	2.1	1.4	0.9	1.5	0.5	0.5
4B	13.3	9.8	9.5	9.8	3.5	3.9	3.3	0.5	0.7	2.4	2.1	1.8	2.5	0.6	0.5
5A	14.1	10.4	10.6	9.9	3.9	4.7	3.6	1.6	0.8	2.8	2.5	2.0	2.5	0.7	0.6
5B	16.3	12.0	12.0	12.4	4.3	5.6	4.3	0.7	1.1	3.2	3.3	2.5	2.8	0.8	1.0
6A	18.0	14.3	12.5	12.7	4.7	5.9	4.5	0.7	1.2	3.5	4.3	2.8	3.4	0.9	0.9
6B	19.2	14.5	13.0	13.7	4.8	6.4	4.7	0.8	1.7	3.7	4.7	3.1	3.7	1.0	0.9
7A	21.3	16.6	14.6	15.2	5.6	6.7	5.2	0.8	2.4	3.8	5.1	3.3	3.9	1.3	0.9
7B	22.2	17.3	14.0	15.0	5.6	7.2	5.3	0.8	2.7	4.4	5.9	3.5	4.3	1.4	1.0
8A	24.5	18.6	16.0	16.7	6.1	7.9	5.6	0.9	2.7	4.9	7.7	4.0	4.3	1.9	1.0
8B	24.8	19.7	15.6	17.3	6.1	8.8	5.6	2.5	3.3	5.3	7.6	4.5	4.9	1.7	1.4



CLEVELAND ARITHMETIC TESTS

DIAGRAM I.—LENGTHS OF HORIZONTAL LINES ARE PROPORTIONAL TO MEDIAN SCORES MADE BY THE VARIOUS GRADES

Inspection of the graph for Test A in Diagram I makes clear that the increase in accuracy in adding pairs of one-place numbers is fairly uniform. The increase in accuracy for grade 5A over 4B is less than that of 4B over 4A or of 5B over 5A; similarly, the increase in accuracy of grade 7B over 7A is less than that of 7A over 6B or of 8A over 7B.

The irregularities indicated in the diagram for Test A take on added significance when it is noted that just as grade 5A made less than normal progress in Test A, so it fell somewhat short in Test B, and fell markedly short in Test D. Grade 7B fell short in increase of accuracy in Test A; it is normal in Test B; but abnormal to the extent of an actual loss in accuracy as compared with the preceding grade, in tests C and D.

The four graphs for tests A, B, C and D seem to indicate (by the lower scores made) that subtraction is more difficult than addition, and that multiplication is more difficult than subtraction. Division seems to be slightly easier than multiplication. In this, the scores made by the Philadelphia schools are in exact agreement with the records made by other school systems in which these tests have been given.

The graph for simple Division (Test D) is especially irregular, and indicates difficulties at grade 5A and 7B in particular. The graph for Test I (division of five-place numbers by one-place numbers) gives evidence of very slight gain in accuracy from grade 5B to 6A, and total absence of gain of grade 8A over 7B.

The irregularities mentioned above of grades 5A and 7B, together with the loss of accuracy in multiplication by grade 8B indicated by the graph for Test C, indicate difficulties in the arrangement of the course of study and in teaching practice that should be investigated, and remedied.

TABLE 2.—GIVING EXTREME VALUES OF MEDIANS FOR SCHOOLS IN ALL GRADES FROM 3A TO 8B, FOR TESTS A, B, C AND D

Grade.	Test.							
	A		B		C		D	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.
3A	1.6	14.5	0.6	6.0	0.6	8.4	0.6	5.3
3B	2.8	15.0	0.0	11.2	0.6	9.6	0.8	6.8
4A	4.3	18.5	0.9	13.8	0.9	13.5	1.6	12.5
4B	8.0	18.5	1.9	15.7	5.0	12.4	4.9	11.5
5A	9.0	19.5	0.9	15.2	0.9	13.7	7.3	12.3
5B	12.0	26.8	2.8	19.1	7.0	16.6	7.5	16.0
6A	13.3	25.0	7.3	20.5	9.5	17.1	7.5	17.8
6B	13.5	25.0	9.0	27.0	8.5	16.1	9.2	16.8
7A	17.0	26.0	13.2	20.7	11.9	16.5	11.5	19.3
7B	17.2	26.9	13.0	23.5	10.3	16.8	10.5	18.6
8A	19.3	29.5	14.7	25.3	11.5	18.4	14.0	21.2
8B	19.1	31.0	15.8	26.0	12.8	21.4	13.8	22.3

The scores for grades 8A and 8B show that in tests E and G (addition of short columns of single figures and multiplication of four-place numbers by one-place numbers) there was no gain in accuracy; and that in tests C, K and N (multiplication of one-place numbers by one-place numbers, and long division) there is a loss of accuracy, in going from grade 8A to 8B. These deficiencies in the eighth grade are probably to be explained by the fact that the course of study requires algebra to be taught in the second half of the eighth year, and this tends to cause neglect of arithmetic work.

Range of Variation of Scores Made by the Different Grades.—A study of the scores made in the various tests makes clear the fact that there is a wide range between the lowest and highest scores. In order to set forth the facts concerning this matter, Table 2 was compiled, giving the lowest and highest values of median scores made in tests A, B, C and D.

From this table it is apparent that in Grade 6B, some school has a median score of 13.5 in test A, while another school has a score 25.0 in the same test; that some school has a median score of 9.0 in test B, while another has a median score of 27.0; and so on.

These facts for grade 6B are represented in Diagram II, which gives for each of the four tests—A, B, C, and D—the lowest and highest median scores made in any school, together with the median for the whole city in this grade.

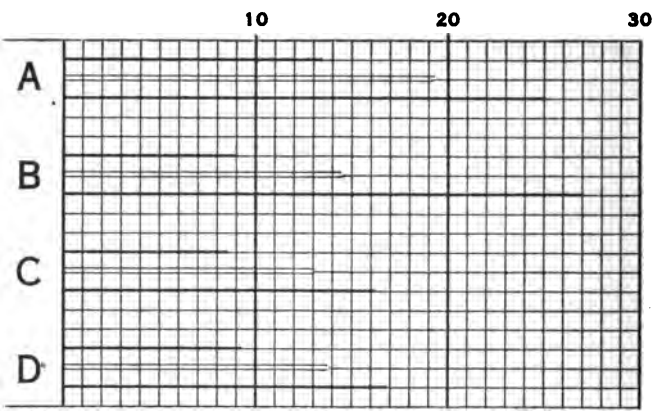


DIAGRAM II.—GRAPHS SHOWING RANGE OF MEDIANS FOR ALL SCHOOLS IN GRADE 6B, IN TESTS A, B, C, and D. THE DOUBLE LINE IN EACH CASE GIVES THE CITY MEDIAN

From the table it is clear that in grade 6B, the highest score made by any school for test A is 185 per cent of the lowest score; for test B

the highest score is 300 per cent of the lowest; for test C, the highest score is 190 per cent of the lowest; for test D, the highest score is 183 per cent of the lowest score.

This variation in the median scores made by individual schools may be considered together with the variation in medians for districts, as shown in Table 3, where the median scores for grade 6B in the various districts, in test A, are seen to range from a minimum value of 17.4 to a maximum value 21.2.

TABLE 3.—SET A. TABLE GIVING MEDIAN SCORE OF EACH GRADE OF EACH DISTRICT

SET A

District.	Grade.											
	3A	3B	4A	4B	5A	5B	6A	6B	7A	7B	8A	8B
I	5.6	8.0	10.6	13.8	14.5	17-4	19.8	18.4	22.4	22.8	26.4	24.7
II	6.1	7.7	8.8	10.5	17.3	14.0	17.4	17.4	20.9	21.0	26.0	25.5
III	3.9	6.6	11.5	12.3	13.6	17.6	20.5	20.8	20.0	24.9	....	25.7
IV	6.3	7.9	12.0	13.8	13.3	16.9	15.8	19.2	22.4	21.7	22.2	24.2
V	6.5	9.9	11.1	13.7	13.9	16.7	18.0	21.2	20.4	22.2	24.8	26.5
VI	5.3	8.5	8.8	13.3	17.1	16.0	24.0	20.6	22.5	23.0	....	25.1
VII	6.8	9.2	9.9	13.4	13.6	16.0	17.3	17.7	22.5	22.6	24.8	27.3
VIII	8.8	8.2	10.8	13.4	16.0	16.3	16.9	17.9	20.3	18.5	21.1	21.8

These results give rise to the recommendation that supervision of the arithmetic work in the individual schools, and in the schools of the various districts as groups, be based in large measure upon the results of tests such as those that are here considered.* One outcome that may then be confidently looked for, will be the more careful study of methods and procedures, and the general adoption of those that have been proved to give the best results.

Comparison of Records Made by Separate Districts.—The records made by the various districts in the different tests were studied. Table 3 gives the median scores of each grade in the eight districts for Test A. Similarly Tables 4, 5, 6 give median scores for Tests B, C, and D.

TABLE 4.—SET B. TABLE GIVING MEDIAN SCORE OF EACH GRADE OF EACH DISTRICT

SET B

District.	Grade.											
	3A	3B	4A	4B	5A	5B	6A	6B	7A	7B	8A	8B
*I	1.6	4.2	5.6	10.0	10.7	10.9	16.8	14.9	15.8	17.9	19.7	19.9
II	1.6	3.8	4.9	8.0	11.4	11.1	14.4	16.5	16.0	16.5	19.4	20.1
*III	1.3	1.0	6.9	9.9	9.9	11.3	14.3	15.3	17.3	19.3	....	19.8
IV	1.9	2.0	7.6	9.3	9.5	11.4	11.8	14.5	16.8	16.5	16.2	17.7
*V	3.2	5.6	7.8	9.8	10.5	12.8	11.5	14.7	16.0	18.2	18.9	20.9
VI	1.4	4.4	5.3	9.7	11.2	12.2	16.6	14.6	17.0	19.0	....	17.8
VII	1.1	3.9	7.1	9.1	8.0	12.6	11.8	15.0	16.7	17.2	17.2	20.5
VIII	3.0	4.6	6.9	10.6	9.9	12.0	13.5	13.4	13.7	15.5	16.7	18.0

* See Addenda.

TABLE 5.—TEST C. TABLE GIVING MEDIAN SCORE FOR EACH GRADE OF EACH DISTRICT

SET C

District.	Grade.											
	3A	3B	4A	4B	5A	5B	6A	6B	7A	7B	8A	8B
I	1.6	2.9	5.8	8.8	10.7	12.0	14.1	12.8	15.7	14.6	16.7	16.7
II	1.6	3.3	4.6	10.8	10.7	10.6	12.9	12.8	14.2	12.4	17.0	15.8
III	1.9	4.5	8.4	10.2	9.0	12.2	12.2	14.1	12.6	14.9	....	15.5
IV	1.2	1.6	9.5	9.5	11.0	11.5	11.9	13.0	14.4	13.6	16.1	14.9
V	2.0	4.5	8.6	11.0	11.0	12.3	11.3	13.8	14.7	14.3	15.1	15.4
VI	1.7	4.6	4.8	8.9	12.3	12.0	15.1	13.0	15.0	14.4	....	15.9
VII	1.9	5.5	7.6	9.7	11.0	12.6	11.5	13.5	13.8	14.3	15.0	16.4
VIII	2.5	1.8	7.8	9.8	10.1	10.8	13.4	11.0	13.0	12.7	14.0	14.4

TABLE 6.—TEST D. TABLE GIVING MEDIAN SCORE FOR EACH GRADE OF EACH DISTRICT

SET D

District.	Grade.											
	3A	3B	4A	4B	5A	5B	6A	6B	7A	7B	8A	8B
I	8.0	3.0	4.9	7.5	9.1	12.3	13.5	12.6	15.9	15.9	18.1	17.3
II	1.1	2.3	4.9	8.0	9.9	11.0	12.8	13.1	15.1	14.8	18.4	17.7
III	1.3	2.0	6.1	8.0	11.0	12.8	13.8	13.5	14.7	15.7	....	17.8
IV	1.2	3.0	6.9	7.8	7.7	12.7	12.5	14.0	13.1	14.7	15.8	16.5
V	1.7	3.7	6.3	8.2	10.1	12.2	12.4	14.4	14.7	14.9	16.5	17.5
VI	1.2	2.4	4.8	7.3	10.5	11.5	13.3	13.5	19.3	15.3	....	16.6
VII	2.1	3.3	5.2	7.8	11.0	12.5	11.9	14.2	14.4	15.1	16.2	18.5
VIII	1.4	3.2	5.0	8.8	7.6	12.3	11.5	12.9	16.0	14.6	16.0	16.5

TABLE 7.—TEST A. TABLE EXHIBITING RANK OF EACH DISTRICT FOR EACH GRADE, ASCRIBING VALUE 8 TO FIRST PLACE, 7 TO SECOND PLACE, ETC., AND GIVING SUM OF ALL RANKINGS IN THE LAST COLUMN

District.	Grade.											Sum of All Ranks.
	3A	3B	4A	4B	5A	5B	6A	6B	7A	7B	8B	
I	3	4	4	7	5	7	6	4	5	6	3	54
II	4	2	1	1	8	1	4	1	4	2	5	33
III	1	1	7	2	2	8	7	7	1	8	6	50
IV	5	3	8	7	1	6	1	5	5	3	2	46
V	6	8	6	6	4	5	5	8	3	4	7	62
VI	2	6	1	3	7	2	8	6	7	7	4	53
VII	7	7	3	4	2	2	3	2	7	5	8	50
VIII	8	5	5	4	6	4	2	3	2	1	1	39

The districts were arranged in the order of the scores made for each grade in each of these four tests, and values were ascribed to the ranks: the value 8 to first place, 7 to second place, etc. Table 7 shows the rankings thus determined for Test A, and Tables 8, 9 and 10 for Tests B, C, and D.

TABLE 8.—TEST B. TABLE EXHIBITING RANK OF EACH DISTRICT FOR EACH GRADE, ASCRIBING VALUE 8 TO FIRST PLACE, 7 TO SECOND PLACE, ETC., AND GIVING SUM OF ALL RANKINGS IN THE LAST COLUMN

District.	Grade.											Sum of All Ranks.
	3A	3B	4A	4B	5A	5B	6A	6B	7A	7B	8B	
I	4	5	3	7	6	1	8	5	2	5	5	51
II	4	3	1	1	8	2	6	8	3	2	6	44
III	2	1	4	6	3	3	5	7	8	8	4	51
IV	6	2	7	8	2	4	2	2	6	2	1	37
V	8	8	8	5	5	8	1	4	3	6	8	64
VI	3	6	2	4	7	6	7	3	7	7	2	54
VII	1	4	6	2	1	7	2	6	5	4	7	45
VIII	7	7	4	8	3	5	4	1	1	1	3	44

TABLE 9.—TEST C. TABLE EXHIBITING RANK OF EACH DISTRICT FOR EACH GRADE, ASCRIBING VALUE 8 TO FIRST PLACE, 7 TO SECOND PLACE, ETC., AND GIVING SUM OF ALL RANKINGS IN THE LAST COLUMN

District.	Grade.											Sum of All Ranks.
	3A	3B	4A	4B	5A	5B	6A	6B	7A	7B	8B	
I	2	2	3	1	3	4	7	2	8	7	8	47
II	2	3	1	7	3	1	5	2	4	1	5	34
III	6	5	6	6	1	6	4	8	1	8	4	55
IV	1	6	8	3	6	3	3	4	5	3	2	44
V	7	4	7	8	6	7	1	7	6	4	3	60
VI	4	6	2	2	8	4	8	4	7	6	6	57
VII	5	8	4	4	6	8	2	6	3	4	7	57
VIII	8	1	5	5	2	2	6	1	2	2	1	35

TABLE 10.—TEST D. TABLE EXHIBITING RANK OF EACH DISTRICT FOR EACH GRADE, ASCRIBING VALUE 8 TO FIRST PLACE, 7 TO SECOND PLACE, ETC., AND GIVING SUM OF ALL RANKINGS IN THE LAST COLUMN

District.	Grade.											Sum of All Ranks.
	3A	3B	4A	4B	5A	5B	6A	6B	7A	7B	8B	
I	1	4	2	2	3	4	7	1	6	8	4	42
II	2	2	2	5	4	1	5	3	5	3	6	38
III	5	1	6	5	8	8	8	4	3	7	7	62
IV	3	4	8	3	2	7	4	6	1	2	1	41
V	7	8	7	7	5	3	3	8	3	4	5	60
VI	3	3	1	1	6	2	6	4	8	6	3	43
VII	8	7	5	3	7	6	2	7	2	5	8	60
VIII	6	6	4	8	1	4	1	2	7	1	1	39

The final columns of the last mentioned tables give the summaries of the rankings of the Districts in the four tests. These summaries are compiled in Table 11, from which it is clear that District V had the highest rank in Tests A, B, and C, and second rank in Test D. District II had the lowest rank in Tests A, C, and D and next to the lowest in Test B. The last column of Table 11 gives the ranks of the eight Districts for all four tests combined. The five districts occupying the

highest places are the same five that are found at the top of the rankings for each test separately, and the three districts in lowest places are the three having lowest place in each test separately.

TABLE 11.—EXHIBITING RANKS OF THE VARIOUS DISTRICTS FOR TESTS A, B, C AND D, AND GIVING RANK OF EACH DISTRICT FOR ALL TESTS COMBINED

Rank.	Test A.	Test B.	Test C.	Test D.	All Tests.
1	V	V	V	III	V
2	I	VI	VI	V	VI
3	VI	III	VII	VII	III
4	III	I	III	VI	I
5	VII	VII	I	I	VII
6	IV	VIII	IV	IV	IV
7	VIII	II	VIII	VIII	VIII
8	II	IV	II	II	II

It would be unwise to lay very much stress upon the district rankings here spoken of. The fact that three districts have the lowest scores in each of the tests suggests a careful study of the underlying causes, and the working out of remedies.

Comparison with Other Cities.—The arithmetic work done in the Philadelphia elementary schools may be compared with the arithmetic work done in other cities on the basis of the scores made in the Cleveland Arithmetic Tests.

These tests were given in the schools of Cleveland, St. Louis, and Grand Rapids. The results of tests A, B, C, and D are shown graphically in Diagrams III, IV, V, and VI. It will be noted that the curves for the Philadelphia record run parallel to the curves for other cities, and indicate lower scores. The graphs for all the other tests are in general similar to those for the first four.

The results of the tests concerning fractions (H and O), set forth in Table 12 and in Diagrams VII and VIII, are especially significant when compared with the scores for these tests from other cities.

TABLE 12.—GIVING RESULTS OF THE TESTS DEALING WITH FRACTIONS

Grade	H				O			
	Grand Rapids.	St. Louis.	Cleveland.	Philadelphia.	Grand Rapids.	St. Louis.	Cleveland.	Philadelphia.
3A	...	0.7	...	0.5	...	0	...	0.5
3B	...	3.8	...	0.5	...	0	0	0.5
4A	...	7.8	...	0.5	...	0	...	0.5
4B	...	6.8	...	0.5	...	2.5	0	0.5
5A	...	4.8	...	1.6	...	3.3	...	0.6
5B	6.3	6.5	5.0	0.7	...	3.3	0	1.0
6A	6.2	8.0	...	0.7	3.5	3.6	...	0.9
6B	6.5	8.1	5.5	0.8	3.6	4.1	3.1	0.9
7A	9.0	9.5	...	0.8	3.9	4.8	...	0.9
7B	7.8	9.7	7.7	0.8	4.6	5.6	4.1	1.0
8A	8.6	10.8	...	0.9	5.5	6.1	...	1.0
8B	8.8	12.0	8.5	2.5	4.8	6.6	5.5	1.4

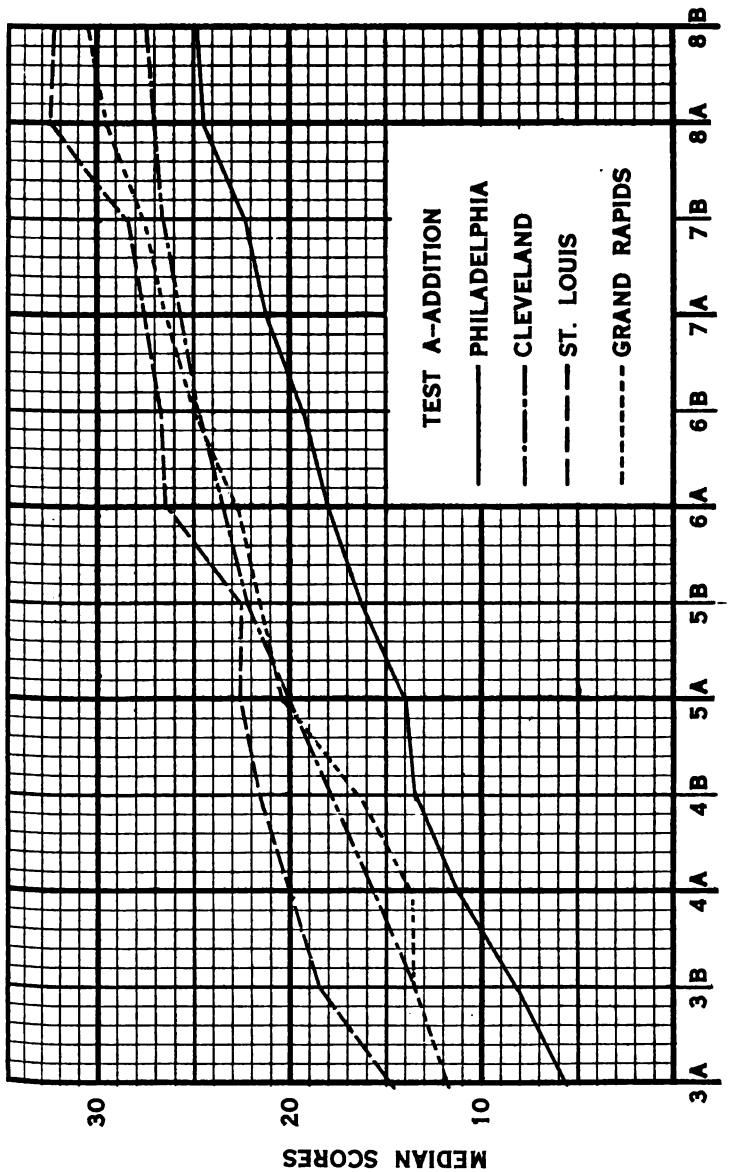

TEST A-ADDITION
PHILADELPHIA
CLEVELAND
ST. LOUIS
GRAND RAPIDS
MEDIAN SCORES
30
20
10
GRADES
3A
3B
4A
4B
5A
5B
6A
6B
7A
7B
8A
8B

DIAGRAM III

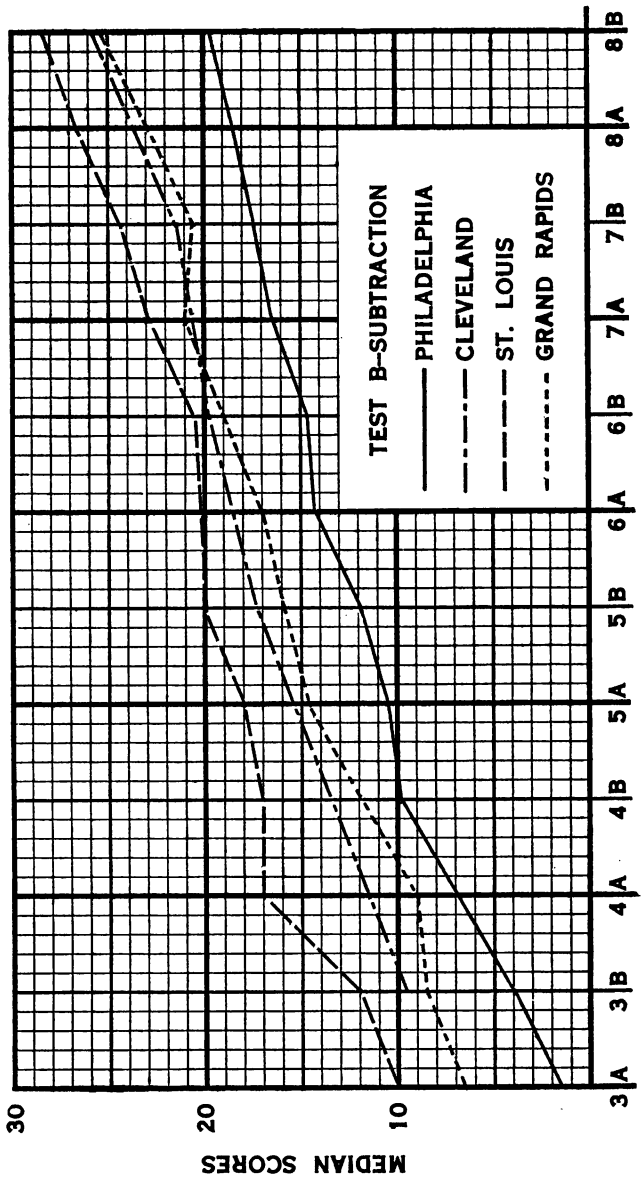

TEST B-SUBTRACTION
PHILADELPHIA
CLEVELAND
ST. LOUIS
GRAND RAPIDS
MEDIAN SCORES
30
20
10
3A
3B
4A
4B
5A
5B
6A
6B
7A
7B
8A
8B
GRADES

DIAGRAM IV

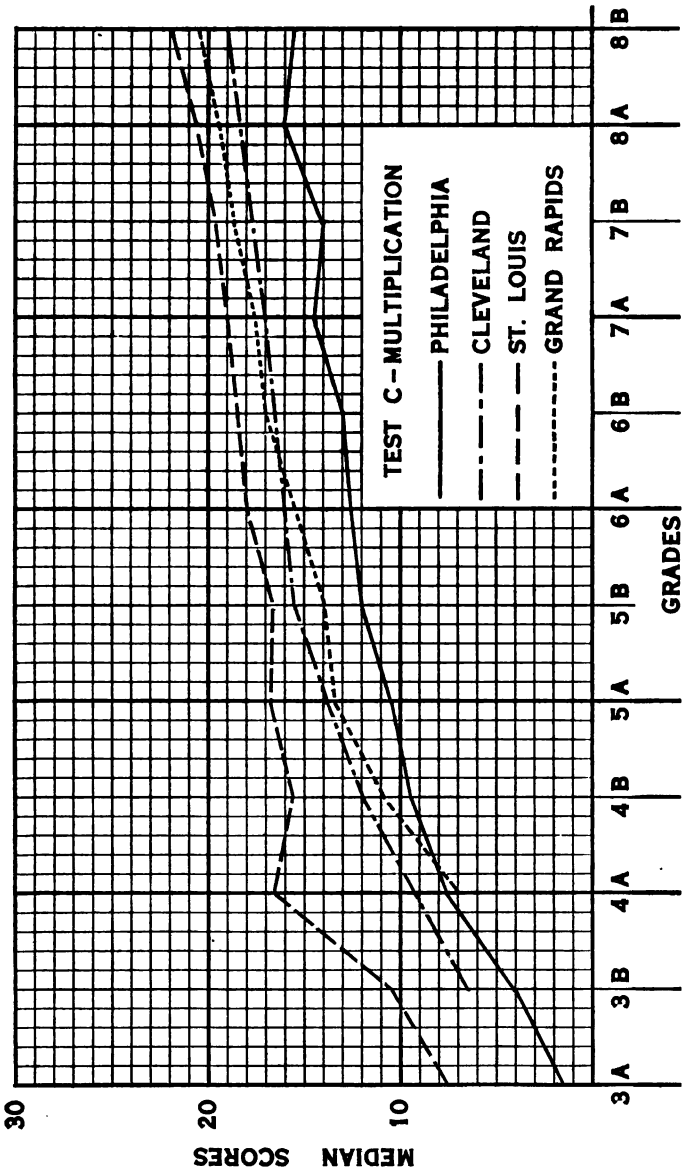

TEST C – MULTIPLICATION
PHILADELPHIA
CLEVELAND
ST. LOUIS
GRAND RAPIDS
MEDIAN SCORES
30
20
10
GRADES
3 A
3 B
4 A
4 B
5 A
5 B
6 A
6 B
7 A
7 B
8 A
8 B

DIAGRAM V

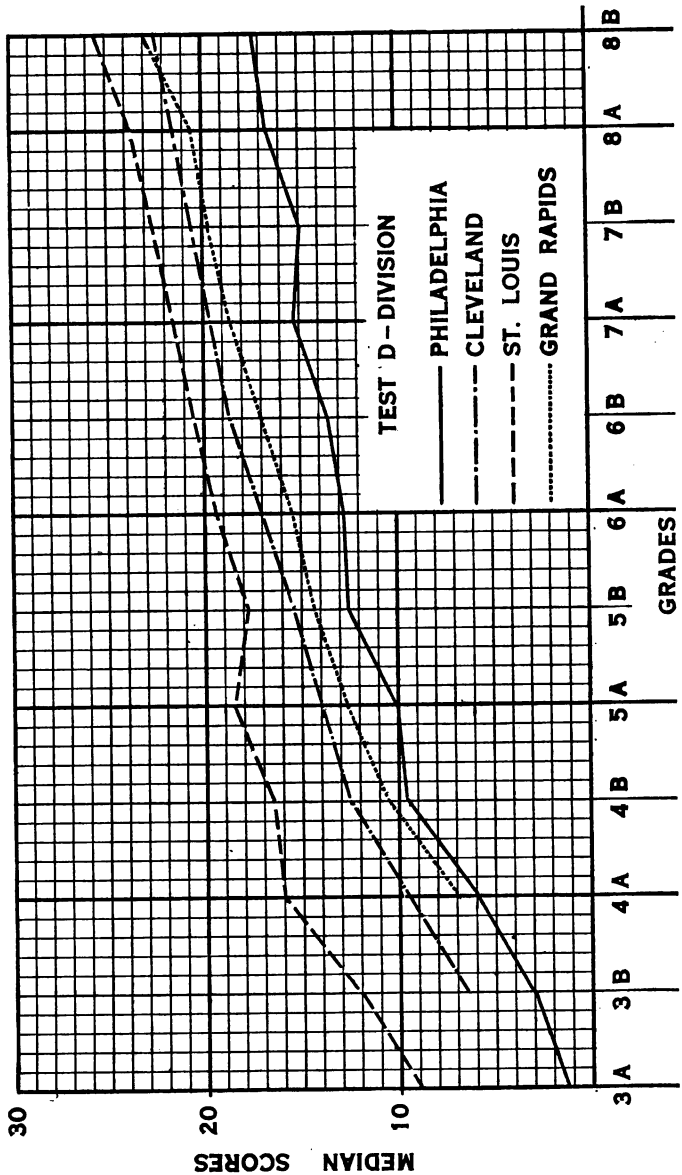

TEST D-DIVISION
PHILADELPHIA
CLEVELAND
ST. LOUIS
GRAND RAPIDS
MEDIAN SCORES
30
20
10
GRADES
3 A
3 B
4 A
4 B
5 A
5 B
6 A
6 B
7 A
7 B
8 A
8 B

DIAGRAM VI

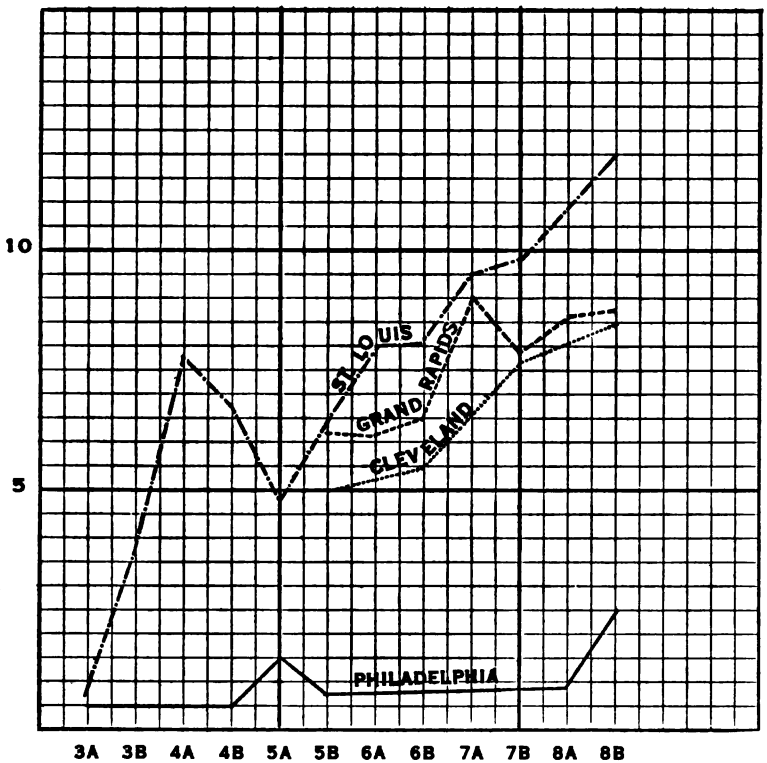


DIAGRAM VII.—GRAPH REPRESENTING DATA RELATING TO TEST H

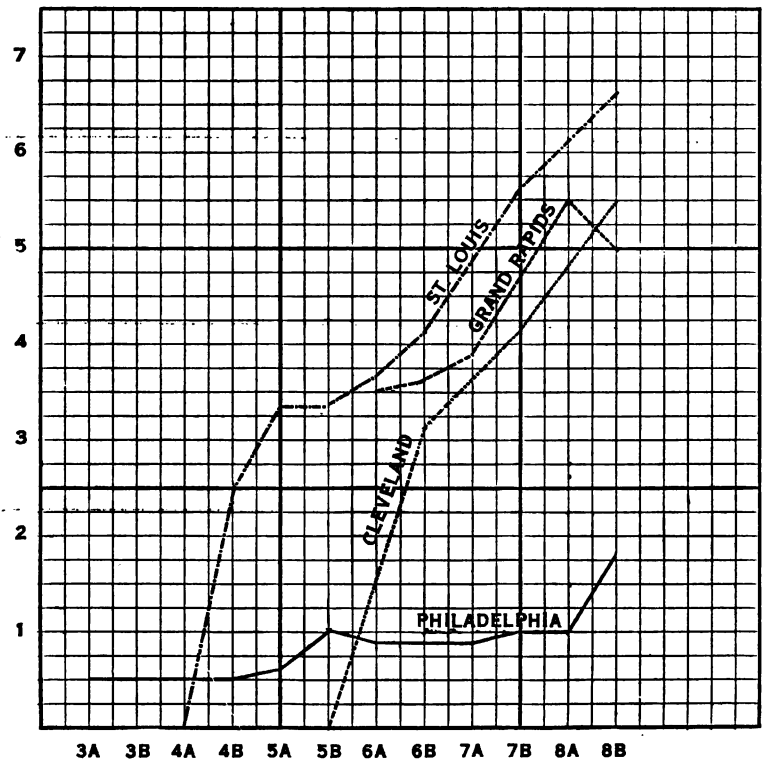


DIAGRAM VIII.—GRAPH REPRESENTING DATA RELATING TO TEST O

The present course of study in arithmetic for the elementary schools of Philadelphia does not mention the subject of fractions until the fourth grade is reached. The presentation of fractions is called for in grades four and five; and in grades six, seven, and eight only reviews of essential processes with fractions are called for.

It is clear from the results of the tests, as here shown, that the work done in teaching fractions must be radically modified. Stress should be laid upon the informal, concrete introduction of fractions in construction exercises and measurement and comparative processes in the first three grades. The formal teaching of the processes with fractions must be continued beyond the time limits at present laid down in the course of study, and standards of achievement established for the various grades, based on careful study of tests given in the schools.

The Monroe Reasoning Tests.—The exercises entering into the Monroe Reasoning Tests in Arithmetic for grades 4 and 5, are as follows:

STANDARDIZED REASONING TEST IN ARITHMETIC

Devised by WALTER S. MONROE

For Grades 4 and 5

1. Mr. Black received $2 a yd. for broadcloth. He sold 78 yds. How much did he receive?
   P=2
   C=2

---

2. If a man has $275 in the bank and draws out $70 how much has he left in the bank?
   P=2
   C=2

---

3. Oats weigh 32 lbs. to a bushel. How many bushels are there in a load weighing 1,344 lbs.?
   P=3
   C=2

---

4. Find the cost of 864 bags of coffee of 130 lbs. each at 6 cents per pound.
   P=4
   C=3

5. Mary worked 20 examples on Monday and 19 on Tuesday. How many did she work in the two days?
P=2
C=1

---

6. After traveling 75 miles, how far must I go to complete a trip of 95 miles?
P=2
C=1

---

7. A car contains 72,060 lbs. of wheat. How much is it worth at 87 cents a bushel?
P=4
C=4

---

8. At 3 cents per foot, what is the cost of sufficient picture molding to go around a room 14 ft. by 14 ft.?
P=4
C=2

---

9. How many pounds of hay are raised on 6 acres at 3,804 pounds to the acre?
P=2
C=2

---

10. A Kansas farmer bought 80 acres of cheap land for $240. Oil being found on his farm, he sold his land for $60,000. What was his profit?
P=3
C=2

---

11. Find the contents of a box 3 ft. long, 2 ft. wide and 2 ft. high.
P=4
C=1

12. Three boys bought a rowboat for $15.75 sharing the expense equally. Find how much each boy has to pay.
P=3
C=2

---

13. By selling butter at 24 cents per pound a lady received enough money to buy 48 lbs. of coffee at 20 cents per pound. How many pounds of butter does she sell?
P=4
C=2

---

14. A house rents for $35 a month. This is how much a year?
P=2
C=2

---

15. Find the change from a two-dollar bill in paying the following amounts on packages to be sent by parcel post: 12 cents, 20 cents, 8 cents, 14 cents, 32 cents.
P=3
C=2

These tests were given in grades four to eight inclusive. The scores made in the various grades are given in Table 13. It will be noted that there are two scores for each grade: one for application of principle, and one for correctness of answer. Along with the Philadelphia scores, Table 13 gives the standard scores, set up as the result of experience with large numbers of schools.

TABLE 13.—RESULTS OF MONROE REASONING TESTS

Grade.	Score for Application of Principle.		Score for Correct Answer.	
	Philadelphia.	Standard.	Philadelphia.	Standard.
4A	....	9.6	4.3	5.0
4B	11.6		6.2	
5A	13.9	17.0	8.9	9.7
5B	17.4		10.6	
6A	....	15.5	6.3	10.2
6B	12.0		8.2	
7A	10.0	20.7	9.0	14.1
7B	14.3		10.4	
8A	15.9	16.8	5.2	8.4
8B	12.1		5.9	

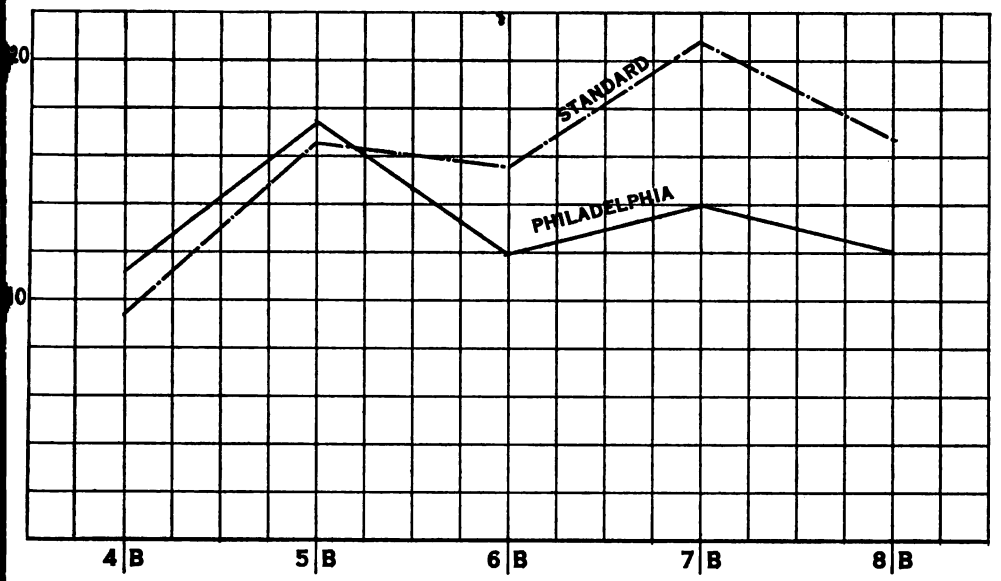


DIAGRAM IX.—GRAPHS FOR MONROE REASONING TESTS

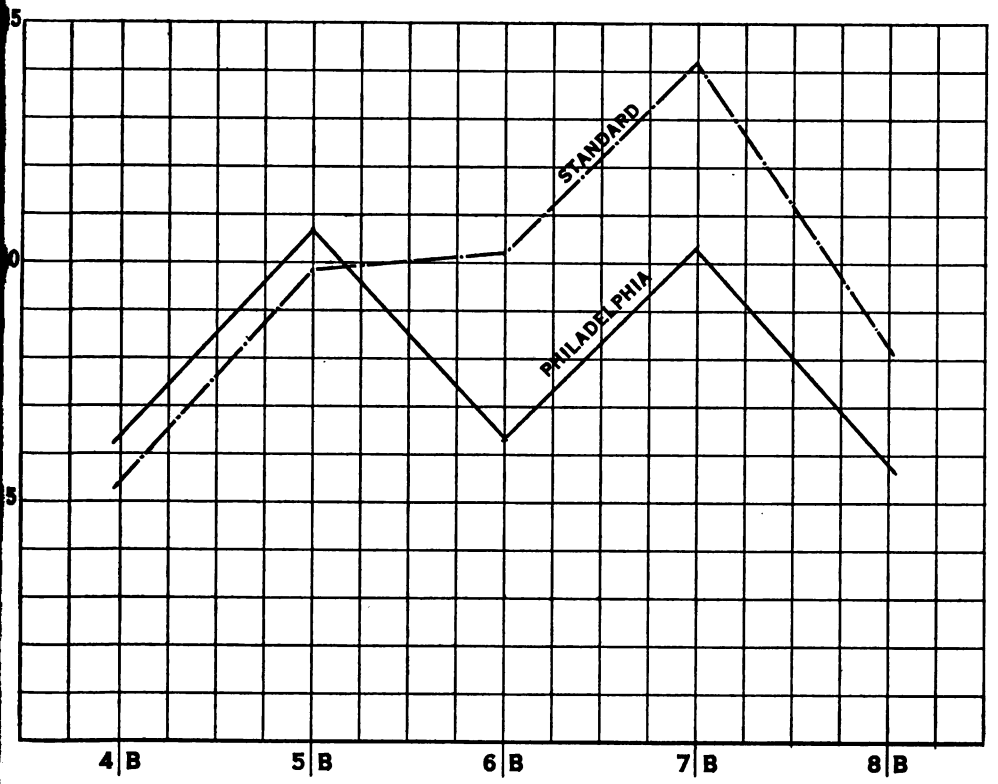


DIAGRAM X.—RESULTS FOR CORRECTNESS OF ANSWER, MONROE REASONING TESTS

Diagrams IX and X exhibit these scores in graphic form. It will be seen that the graphs for Philadelphia are roughly similar to the graphs of the standard scores. It is likewise clear that the Philadelphia scores are higher than standard scores for grades 4 and 5, and that for grades 6, 7 and 8, the Philadelphia scores are somewhat lower than standard scores.

On the whole, taking into account the results of all the tests given, the conclusion is forced that the work now being done in arithmetic in the elementary schools of Philadelphia is not equal to the work being done in this subject in other progressive school systems.

Observation of Arithmetic Teaching. Evidence of practical recognition of "individual differences" in pupils—varying abilities of school children to perform school tasks—was observed in one school visited. At this school special rooms are organized for slow pupils through the third grade, and the principal stated that only lack of teachers prevented further extension of the plan. Undoubtedly numerous other schools could make similar arrangements with advantage to the mathematics work done by the pupils.

Active participation by pupils in the classroom work in arithmetic teaching was observed in a number of schools. In one school, a teacher required pupils to draw free-hand on the blackboard lines of various stated lengths, and then to measure the lines to determine errors. Other pupils were directed to "stand ten feet from the front wall," and to determine the errors in estimated distances by measuring. In another school, hollow models were used to show that the volume of a cone is one-third the volume of a cylinder having the same base and altitude. Such procedure involving active *doing by the pupils*, should form a large part of arithmetic teaching.

Observations made in the course of classroom visits, prompt the following suggestions concerning phases of the technique teaching:

Accurate command of the technical vocabulary of arithmetic may wisely be made a matter of gradual growth. Dividend, divisor, minuend, subtrahend, for instance, are hard words, and correct use of them should not be expected when first the processes concerned are taken up.

The simultaneous use of two different methods of carrying out arithmetical processes is likely to lead to confusion, and waste of time and energy. For instance, in fixing the result of subtracting 8 from 17, to require the children to think of it as "8 from 16 and 1 more," "8 from 10 and 7 more," and "8 from 18 and 1 less," in the course of a single recitation can result only in uncertainty and vagueness.

Games, and going-to-the-store, and child activities generally, are too largely neglected as sources of material for the arithmetic class.

Contests and emulation, however, cease to have any value when the pupils go through them perfunctorily. A contest among the rows of a room over a set of addition exercises, or an attempt by each pupil to excel the record he made on a test exercise yesterday, is of value only so long as the competition enlists real enthusiasm. The skilful teacher will take care not to overwork a useful device.

An arithmetic process should be looked upon as a unit of work to be carried through to completion with no unnecessary interruption in its course. For instance, the addition of a column of numbers should be carried out to the end and the sum determined, before beginning to check the work. Checking each single column addition before proceeding to the next unnecessarily interrupts the pupil's activity in his progress to the result he is seeking.

The use of note books in arithmetic work is apt to lead to a formal type of work of relatively small value unless carefully guarded. For instance, in one school visited all the mensuration facts had been dictated to the pupils and recorded in note books, and these were depended upon and referred to in all problem work. It would be wiser procedure to restrict the number of mensuration facts taught, and to make use of actual experience to fix many of them permanently in mind, so as to make reference to note books relatively less frequent.

A fault commonly observed, petty in itself and yet expensive in time, is the habitual repetition of pupils' answers by the teacher. This violation of good practice in the technique of teaching should be rigorously eliminated.

The mathematics work of the seventh and eighth grades is commonly all done by one teacher in each school. This "departmentalized" teaching is calculated to ensure a better quality of work in these grades than may be looked for when the teacher must prepare lessons in all the subjects in the course of study. Schools in which this procedure is not in vogue should be encouraged to adopt it.

The mathematics work of the seventh grade is devoted to the study of percentage and the business applications of arithmetic; the first half of the eighth grade to mensuration, and the second half to algebra. This is the traditional type of arithmetic work for the upper two years of the eight-year elementary school, with the addition of one-half year of algebra brought from the first year of the high school.

In connection with the emphasis now being placed upon the junior high school in the city of Phiadelphia, steps should be taken to adopt a reorganized course of study in mathematics for use with the seventh and eighth year pupils, whether these be in the elementary schools or in the new junior high schools. The needs of the pupils in these years of school life are the same whether they happen to attend one type of school or the other.

There is considerable weight of opinion in favor of making the mathematics work of these two years comprise the fundamental notions of arithmetic, algebra, and geometry. The course of study in mathematics for the seventh and eighth years should be so organized as to make certain that the pupils have contact with these fundamental ideas throughout the two years. It is desirable to defer the business applications of arithmetic to the latter part of the eighth year. Throughout the work in geometry, it is important to stress the need of having rules and formulas grow out of the pupil's own activities, rather than to have them merely memorized. The following form of organization for the course of study in mathematics for these two years is recommended for consideration:

Seventh Year

Arithmetic: Fundamental operations applied to various kinds of numbers. Percentage and easy applications: games and scores, school and class attendance, profit and loss.

Intuitive Geometry: Construction of figures; tracing, folding, drawing to scale; computation of perimeters and areas based on actual measurements made by pupil.

Algebra: Formulas: constructed by pupil as the outcome of work in mensuration. Equations of simple types, as $bx=c$; $\frac{x}{a}=c$; $\frac{x}{a}=\frac{b}{c}$, where a, b and c are numbers. Straight line graphs.

Eighth Year

Arithmetic: Fundamental operations with emphasis on common fractions and decimals. Percentage: interest and discount. Arithmetic of the community, civic life and investment. Statistical graphs.

Intuitive Geometry: Construction of figures with rule and compasses; Pythagorean theorem; informal development of mensuration of areas and volumes of plane and solid figures.

Algebra: More complicated mensuration formulas, with their evaluation; square root; equations of the type $ax+b=c$ and $ax+b=cx+d$, when a, b, c, and d are numbers. Graphs.

RECOMMENDATIONS

1. Supervision of mathematics work in the individual elementary schools and in the districts, should be based upon the results of standardized tests. Materials and methods of teaching, as well as the course of study, should be modified from time to time in the light of the objective comparisons made possible by the results of such tests.

2. The mathematics course of study for the seventh and eighth years should be revised, and should be the same for pupils in these years in the elementary schools and in the junior high schools.

Mathematics in the High Schools.—General Principles. Two fundamental ideas underlying the present-day teaching of high school mathematics may be stated as follows:

(A) *Power to understand and to analyze relations of quantity and of space is necessary to the understanding and control of environment, and to an appreciation of the progress of civilization.*

To understand the language of algebra, and to be able to use this language intelligently in the expression of simple quantitative relations, has come to be a matter of necessity for all pupils who advance as far as the secondary school. To appreciate the meaning of a formula, and to be able to work out simple problems by setting up the necessary equations and solving them, is now a part of the mental equipment of every person who would lay claim to even the minimum of a general high school education. Graphical representations of various kinds nowadays are frequently used in the popular magazines and the daily press, in discussions of current scientific, social, industrial, and political problems, and to understand and interpret these graphical representations is necessary for an appreciation of the history and social movements of our day.

Every high school pupil needs to acquire the ideas and concepts in terms of which the quantitative thinking of the world is done—lengths, areas, volumes, velocities, rates in general, positive and negative numbers, similarity, and proportionality,—and to develop ability to think clearly in terms of these ideas and concepts. That is to say, every high school pupil needs training in:

(a) Analysis of a complex situation into simpler parts, and the recognition of the essential factors and rejection of the irrelevant.

(b) The recognition of logical relationships between interdependent factors and the understanding and expression of such relationships.

(c) The discovery and understanding of a general law as a generalization from particulars, with careful attention to logical organization.

To develop these powers of understanding and analyzing relations of quantity and space, and to develop the habits of thinking that will

make powers effective in the life of the individual, are primary purposes in the teaching of mathematics.

(B) *The mathematics work in each year should be so planned as to give the pupil the most valuable mathematical information and training which he is capable of receiving in that year.*

The high school has in times past been conceived of as primarily an agency for preparing young people for attendance at college, and the materials of instruction were formerly determined mainly by their fitness, assumed or actual, to enable the high school to perform this function. The facts regarding high school attendance indicate clearly that there is a heavy progressive loss in high school population from year to year, and the new educational ideals require the high school to prepare *all* of its young people for duties and responsibilities as citizens in the world of today. Materials of instruction of fundamental importance to all must, therefore, be required early in the course, in order to reach the large number of pupils before elimination has become effective. These materials of instruction must be of value to the pupil in manipulating his present-day environment and must be related to his actual interests and activities. The subject matter of instruction must always be made immediately worth while to the pupil.

In the present study of the mathematics teaching in the high schools of Philadelphia, criticisms and suggestions are based on the two stated fundamental principles as criteria.

Method of Conducting the Survey. Personal visits were made to all the high schools. Interviews with the Heads of the Departments of Mathematics provided information as to the facts characteristic of the various schools, and, so far as was possible, visits were made to each teacher of the mathematics corps while in charge of a class.

Standardized tests in Algebra and Geometry were given to certain classes in the High School under the direction of Doctor J. H. Minnick, of the University of Pennsylvania. A report of the results of these tests is given on pages 284 to 286.

General Impression. An observer visiting the mathematics classrooms of the high schools of Philadelphia comes away with the impression that the quality of work done varies between wide limits. Thus, while a number of teachers in the schools are alive to the movement now going on in the direction of reorganization of the teaching of mathematics in secondary schools, other individuals, even one head of a department, are certain that all the reforms now being proposed are valueless, and that the present procedure is the best possible. While many instructors obviously conceive of their duties as being completely

accomplished by a mechanical attention to routine, beginning with the opening-bell and closing promptly with the last class, others exhibit an interest transcending mere textbook assignments and the hearing of recitations, and resulting in most excellent teaching.

Absence of Coördination Among the High Schools. The extent to which each school is a law unto itself is sure to impress one who visits all the schools. While appreciating fully the value of individuality in the schools, one may affirm that a certain degree of coördination is highly desirable in the schools of a city system, and that the high schools of Philadelphia will be the better for conforming in a measure to uniform standards in curriculum, requirements for promotion and graduation, size of classes, teaching load for the instructors, and the like.*

Course of Study in Different Schools. The course of study in mathematics varies considerably in the high schools of Philadelphia. For instance, at one school commercial pupils are required to take algebra and geometry; at other schools, commercial pupils get one semester only of algebra and no opportunity to take any geometry. Some schools have their offerings in mathematics limited to algebra and plane geometry; another offers algebra, plane geometry, solid geometry, plane and spherical trigonometry. In one school the first one and one-half years are spent on algebra, and the second half of the third year on advanced algebra. Several schools give the first year, and also the sixth and seventh semesters, to algebra. At another school, a total of two and one-half years is given to the study of algebra.

Thus it is seen that in some schools there is prevalent an overemphasis on teaching that is too largely formal, devoted to the development of skill in mere manipulation of a type that is useless even when it is secured. Furthermore, by the present arrangement of the course of study, the large number of pupils who drop out of high school at the end of the ninth school year are deprived of opportunity to gain any knowledge of branches of elementary mathematics other than Algebra.

At one school a pupil was found taking the first half of plane geometry for the third time. For such a pupil as this, the mathematics subject should not be an absolute requirement for graduation; he should be permitted to substitute an equivalent amount of work in some other subject, after earnest trial has shown the mathematics subject to be too difficult.

RECOMMENDATIONS

The first year's work in mathematics for all four-year high schools should be made a year of "composite," or "general," mathematics, to

* See Addenda.

include the fundamental notions of algebra, of intuitive geometry, of numerical trigonometry, and of enough demonstrative geometry to enable the student to comprehend the meaning of a demonstration.

The first year's work in mathematics should be prescribed for all students in the first year. All other courses should be elective.

In general, the second year should be devoted to the study of geometry, plane and solid; the third year to the further study of algebra and of trigonometry with thoroughgoing reorganization of the subject matter included under each of these topics. The fourth year to be given up to such further study of topics in mathematics as the needs of the pupils may determine.

Courses of Study for Boys and for Girls. The Course of Study in the girls' schools commonly requires three semesters to be spent in studying plane geometry, while the same subject is completed in two semesters in the boys' schools. This difference in time-allotment for plane geometry is maintained when boys' and girls' classes are found in the same school. Only exceptionally are solid geometry and trigonometry offered in the girls' schools or to girls' classes when boys and girls attend the same school.

In the absence of any valid reason for these differences, measures should be taken to equalize the opportunities for boys and girls to study mathematics in the high schools of Philadelphia.

RECOMMENDATION

The mathematics subjects offered in boys' and girls' schools should be the same, with the same time requirements in each.

Preparation for College Entrance Examinations. Too much importance is attached to preparation for college entrance examinations. In one school for boys the seniors are given a course which consists entirely of the solution of problems selected from college entrance examination papers. To use the time of a teacher and of a whole class in a public high school to prepare a small number of the class for taking examinations for entrance into certain private institutions of higher learning is surely a serious infringement of the rights of the members of the class who are not planning to enter these institutions.

RECOMMENDATION

Class work now being given with the specific aim of preparing for college entrance examinations should be replaced by instruction in subject matter immediately worth while to the entire class.

Arrangement of Classes on the Basis of Ability. Experience has shown that the pupils in any group vary considerably in ability. The ordinary division of the pupil body into classes on the basis of alphabetic

arrangement of names, or curriculum elected, or what not, does not take account of this fact and throws into one class pupils of all types—of superior, of moderate, and of inferior ability. Segregation of the pupils on the basis of ability determined by tests of various sorts, or by short trial of the subject, enables the administrator to arrange classes so as to have only one type of pupil in a class, and thus to have every pupil work with his equals, and to progress at the limit of his capacity. Some of the high schools in Philadelphia have made experiments in this direction, but the majority give no indication of recognition of its importance.

RECOMMENDATION

Mathematics classes (particularly in the first and second years) should be arranged so as to make the classes homogeneous as to ability.

Supervision. The supervision of mathematics teaching by the heads of departments is generally inefficient. The reason for this condition varies. At one school the person appointed as head of the mathematics department and drawing the extra salary attached to the office, devotes his whole time to the supervision of study periods, while the acting head of the department does the work of the department and carries a full teaching schedule besides, without extra compensation; at another school the head of the mathematics department must attend to the supply requisitions and rosters of two departments (mathematics, with 9 teachers; science, with 10 teachers). In general, the heads of departments have insufficient time, free of class teaching, to attend properly to the responsibilities of the position.

There is clear need for the work that could be done by efficient heads of departments, but merely appointing certain individuals to these important positions, and paying them extra salary, does not bring to the school system the results that are needed. With the appointment and the extra salary must go opportunity to attend to the duties that are inherent in the position—making an efficient organization of the department, assigning teachers to work that each can do with greatest good to the school as a whole, on equitable teaching rosters; developing a real professional spirit in the corps of mathematics teachers, bringing with it active interest in educational progress generally and in the progressive improvement of the mathematics course of study specifically; securing increased effectiveness, objectively demonstrable, in the teaching of mathematics.

RECOMMENDATIONS

The heads of the mathematical departments should have, normally, teaching rosters of 15 class-hours per week; and that in case any mathe-

matics head be responsible for duties in other departments, his teaching roster should be proportionately reduced.

The appointment to the headship of the mathematics department should be made conditional upon the successful performance of the duties of the position as sketched above. Failure of the incumbent to meet the responsibilities of the position should result in his removal and the appointment of another individual to the position.

Professional Attitude of Teachers. A professional attitude on the part of high school teachers should be developed. Teacher-participation in discussions and decisions of questions concerning material and methods of mathematics teaching, as is customary in some schools at the present time, should be permitted and required. Widespread interest should be worked up in the publications—books and current periodicals—concerning the high school and its problems in general, as well as the literature of high school mathematics in particular. The organization of study classes to take advantage of the opportunities afforded by the numerous institutions of higher learning in Philadelphia should be encouraged. The formation of such an organization among the mathematics teachers as the mathematics clubs at present active in Chicago, Minneapolis, St. Louis, New York, and other cities, in studying the problems relative to the improvement of the teaching of mathematics, would be of great value.

The Junior High School. The seventh, eighth, and ninth school years are coming to be regarded as constituting an "intermediate school" or "junior high school" and to be separately organized. The courses of study for these school years are the subject of much careful investigation.

The study of mathematics in these years should give the pupils as wide an outlook as possible on mathematics as a whole. The most authoritative recommendations at present available make the subject matter for these years comprise arithmetic, the elements of intuitive geometry, of algebra, and of numerical trigonometry. The recommendations made for the seventh and eighth school years should be understood to apply to these years of the typical eight-year elementary school as well as when they form part of the newer junior high school. The mathematics courses of study in the ninth year of the junior high school and of the typical four-year high school should be so coördinated that pupils coming from both are equally well fitted to take up the study of the mathematics of the tenth school year.

The improvement of mathematics teaching in the upper grades of the high school is conditioned very directly by the teaching of mathematics in the junior high school. Experience has made clear that with efficient teaching in the seventh, eighth, and ninth school years, it is

possible to accomplish much more and much better mathematics work in the senior high school than has been customary heretofore.

RECOMMENDATION

The course of study in mathematics for the three years of the junior high school should be so organized as to make this work of the type known as "composite mathematics," or "general mathematics," comprising arithmetic, and the fundamental ideas of algebra, intuitive geometry, and numerical trigonometry.

Textbooks. The city furnishes free textbooks to all pupils. Frequent complaint was met with, to the effect that classes had to work without textbooks at the beginning of the school term, because of failure of the city to supply promptly the necessary supplies; in other cases, old and out-of-date books were in use because modern texts could not be obtained by the schools. While it is recognized that the administration of the business details involved in the supply of the textbooks for all subjects and years in the high schools will always be difficult to carry through without hitch, yet an adequate supply of up-to-date textbooks is necessary for satisfactory work.

RECOMMENDATION

Steps should be taken to ensure a sufficient supply of modern textbooks in mathematics for all high schools, and that methods be perfected whereby it will be made easier to replace old texts by newer and more appropriate material.

Supplementary Material. Modern ideals of high school teaching involve as great a measure of pupil-activity as possible in the process of learning. The schools should have available for use instruments of precision that employ and exhibit mathematical theories. Simple surveyor's transits and steel tapes enable the pupils actually to measure angles and distances and to appreciate the application of trigonometry and algebra in the work of the world. Various tables, types of rulers and slide-rules should be brought to the pupils' notice; computing machines should be made familiar as aids in the practical use of mathematics.

RECOMMENDATION

Provision should be made for supplying each high school with sufficient supplementary material in the form of books and periodicals for reading up topics having mathematical interest, and of tools and appliances for illustrating the use of mathematics in the practical work of the world and the contribution it makes to the civilization of today.

Technique of Classroom Teaching. The teacher has as great need of proper technique in the classroom as the surgeon has of proper

methods in the hospital operating room—and a professional attitude toward our work should render certain bad practices observed in one or more of the Philadelphia High Schools, as impossible of occurrence as a surgeon's operating with septic scalpels. Such bad practices, for instance, as the following should be eliminated by effective supervision.

Teacher's repetition of a pupil's answer to a question.

Tardiness in beginning and closing the recitation.

Unskillful questioning: repeating questions when answer is not immediately given; asking many questions that permit of "yes" or "no" as answers; permitting concert answers to questions, thus making it impossible to hold pupils responsible for incorrect answers; asking frequent questions that can be answered with a single word.

Failing to make sure of purposeful activity of pupils in the seats when part of the class is sent to the blackboard for work.

Failure to close the recitation with a definite appreciation by the class of the principles underlying the facts discussed, and a clear understanding of just how the principles apply.

Failure to make very clear the assignment of work for the next recitation, and to ensure the pupils' understanding of it.

Neglecting opportunities to secure the self-activity of pupils through which, alone, habits are formed, ambitions aroused, skill acquired.

Tolerating litter on floor and in desks.

Neglect of ventilation; teachers should be encouraged to throw windows wide open between recitations.

Assignment of homework habitually on the basis of so many pages, or exercises, in the textbook.

Summer School Classes. Experience in other cities demonstrates the wisdom of conducting summer high school classes, in which opportunity is given for making up failures, and for doing advanced work by pupils intent on finishing the high school course in less than the regular four years. A number of valuable school plants are, by this means, kept in use during the summer months instead of lying idle, and there is a material saving of pupil-time.

RECOMMENDATION

Summer school classes in mathematics should be established in a limited number of the high schools in Philadelphia.*

The Tests in Algebra and Geometry. Certain classes in Algebra and Geometry in the high schools of Philadelphia were given tests under the

* See Addenda.

direction of Doctor J. H. Minnick, Professor of Educational Method and Dean of the School of Education in the University of Pennsylvania.

Giving and Scoring the Tests. Upper classmen in the School of Education of the University of Pennsylvania gave and scored the tests. Professor Minnick met with these people previous to their giving the tests, and gave precise and definite instructions as to the procedure to be followed. The geometry tests were given in all schools on the same day. The algebra tests were given in all schools on the same day with the exception of the two West Philadelphia high schools, where the arrangement of the school rosters made it necessary to give the algebra tests on the day preceding the day on which the tests were given in all the other high schools.

Professor Minnick gave individual instructions to the persons who scored the test papers, and examined the work of each with sufficient care to insure its correctness. In the case of the geometry tests, every paper was scored by two persons, and differences of opinion were settled by Professor Minnick.

The final tabulation of data and computation of medians were done by Professor Minnick.

The Geometry Test. Minnick's Geometry Test W was given to about thirty per cent of the pupils of each school who would complete all of plane geometry in June. This test was constructed to measure the pupil's ability to prove original exercises.

The test consists of a series of exercises in which the drawings are presented and the pupil is told what is given. He is then asked to make any additional drawings necessary to prove the exercises. Pupils sometimes guess at the drawings and often make a drawing which will result in a proof so difficult that most high school pupils cannot produce the proof. In order to eliminate the results of such guessing the author of the test has tried out the various drawings with a large number of pupils making them and has thus constructed a key for scoring the test.

The detailed results of the geometry test are given in Table 14. In Table 16 the schools are arranged in the order of the scores made, Germantown, with a score of 50.8 standing first, and Central, with a score of 21.7, the lowest. The median score for all the schools of the city is 28.3. The standard established by the author of the test, based on his investigations of very large numbers of pupils, in schools scattered all over the country, is 39.3. It will be seen that the high schools of Philadelphia, as a whole, fall below this standard by about 28 per cent.

The scores made by the girls' schools, and by the girls' classes in the two schools having both boys and girls, are with one exception much higher than the scores made by the boys' schools and boys' classes.

This may be due in part to the longer time that girls are required to spend on geometry. However, even with this advantage, the median score for girls is 39, just about the standard score for a wide range of schools typically devoting one year to the study of plane geometry. The median score for all boys' classes is 25.9, which is 34 per cent below the standard score.

The wide range in score from school to school in Philadelphia, and the wide disparity between the standard score and the median scores for the whole city, and for the boys' schools, point to the urgent need for study of the teaching of geometry in Philadelphia High Schools.

RECOMMENDATIONS

There should be made an investigation of the relative abilities of the boys and girls received into the high schools of Philadelphia, and steps taken to improve the quality of the work in geometry done by the boys' classes.

Supervision should be directed toward the elimination of methods of teaching that emphasize the purely memory side of geometry, and toward the adoption of methods that stress the problem-solving attitude on the part of the pupils, and that emphasize appreciation of the importance of geometry in the cultural life of today.

The Algebra Test. The Hotz Equation and Formula Scale, Series A, was given to about 30 per cent of all pupils completing one year of algebra in June. This test measures the pupil's ability to solve algebraic equations and formulae.

The detailed results of the algebra tests are given in Table 15, and in Table 16 the schools are listed in the order of their scores. It will be noted that the highest score exceeds the lowest by 26 per cent. The median score for the whole city is 6.8. The standard established by the author of the test is 7.8.

Table 16 gives the rankings of the schools in the two tests. It will be noticed that four schools have the same rank in both tests, and that only four schools vary more than one place in the two lists.

General Statement Concerning the Tests. In considering the results of the tests, the following facts and conditions should be carefully kept in mind:

1. The tests are only in part a test of teaching effectiveness. The educational product is dependent upon all the conditions surrounding the child's life, and until each of these conditions is accurately measured, we can not determine what part of the educational product is due to teaching effectiveness alone.

TABLE 14.—RESULTS OF THE GEOMETRY TEST

Number Making Each Score.	School.																	
	Northeast High School.	South Philadelphia High School.		West Philadelphia High School.		Central High School.	Philadelphia High School for Girls.	William Penn High School.	Kensington High School.	Frankford High School.			Germantown High School.			Totals for City.		
	Boys.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Girls.	Girls.	Boys.	Girls.	Boys and Girls.	Boys.	Girls.	Boys and Girls.	Boys.	Girls.	Boys and Girls.
0-9	4	15	0	6	1	6	7	2	0	4	1	5	4	0	4	39	11	50
10-19	18	28	3	16	6	18	17	6	7	13	4	17	16	10	26	109	53	162
20-29	24	24	12	16	13	15	11	6	13	9	6	15	21	13	34	109	74	183
30-39	6	1	0	4	5	1	3	1	2	2	2	4	4	2	6	18	15	33
40-49	5	6	2	5	9	3	5	4	1	6	3	9	2	2	4	27	26	53
50-59	15	7	7	15	9	4	4	10	6	8	7	15	22	27	49	71	70	141
60-69	0	0	0	5	1	0	2	3	0	0	0	0	1	2	3	6	8	14
70-79	1	3	1	0	2	0	2	0	0	2	1	3	2	0	2	8	6	14
80-89	3	1	3	2	1	4	0	3	2	2	2	4	15	5	20	27	16	43
90-99	1	0	2	2	9	1	0	2	2	2	1	3	1	2	3	7	18	25
100-109	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2
110-119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	1	0	0	0	0	0	0	0	0	1	1	2	0	3	3	2	4	6
Totals	78	86	30	71	56	52	51	37	33	49	28	77	88	67	155	424	302	726
Medians	27	22.1	42.5	28.8	43.9	21.7	21.9	49	27	27	41	35	38.8	52.6	50.8	25.9	39	28.3

TABLE 15.—RESULTS OF THE ALGEBRA TEST

Problem No.	School.																	
	Northeast High School.	South Philadelphia High School.		West Philadelphia High School.		Central High School.	Philadelphia High School for Girls.	William Penn High School.	Kensington High School.	Frankford High School.			Germantown High School.			Totals for City.		
	Boys.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Girls.	Girls.	Boys.	Girls.	Boys and Girls.	Boys.	Girls.	Boys and Girls.	Boys.	Girls.	Boys and Girls.
1	1	..	1	..	..	3	1	1	..	..	..	..	2	1	3	6	4	10
2	2	1	2	..	1	7	2	..	..	..	..	..	..	3	3	10	8	18
3	7	7	6	4	..	4	6	2	3	1	2	3	..	7	7	23	26	49
4	18	8	1	7	4	11	7	6	1	2	4	6	2	9	11	48	32	80
5	33	23	9	18	10	28	20	10	3	10	13	23	9	29	38	121	94	215
6	23	38	15	26	40	27	23	12	6	15	20	35	27	24	51	156	140	296
7	20	37	6	26	42	19	21	5	13	13	15	28	44	34	78	153	136	289
8	17	7	9	8	10	15	7	16	10	7	5	12	17	13	30	71	70	141
9	9	3	10	4	4	5	3	9	5	6	2	8	1	5	6	28	38	66
10	..	..	7	..	..	1	1	1	3	1	2	3	1	2	3	3	16	19
11	..	..	..	..	..	2	..	..	..	1	..	1	..	..	..	3	..	3
12	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1
Total	130	118	66	93	111	122	91	63	44	56	63	119	103	127	230	627	565	1187
Medians	6.2	6.4	6.9	6.7	7.0	6.3	6.4	7.2	7.7	7.0	6.7	6.8	7.3	6.6	7.0	6.7	6.9	6.8

2. Almost every test so far developed measures development along the formal or tool side of the subject and no test measures with accuracy the finer and better elements in the educational product. This is especially true of the two tests given in the Philadelphia schools.

3. Too much significance must not be attached to slight variations in the results obtained by testing different schools. Our educational tests have not yet been refined to a point justifying confidence in the accuracy of their results.

4. In some of the Philadelphia high schools, the pupils are grouped according to abilities, in others they are grouped according to the course (academic, commercial, etc.) which they are taking, while in still other schools, the pupils are arranged in classes with reference to no particular system or order. In order to make sure of a random selection of pupils to be tested in each school, it would have been necessary to take from each group a number proportional to the whole number in this group. The time available for the work of giving the tests did not permit of the careful study of each school and detailed arrangements necessary for securing this selection of pupils, and, consequently, comparisons between schools on the basis of the result of these tests, will not be conclusive.

It is felt, however, that for the city as a whole, the pupils tested constitute a fairly random selection.

5. No one of the algebra classes tested had done the work upon which the last three questions of the test were based. This was due to the fact that the test was given almost a month before the close of school.

TABLE 16.—THE PHILADELPHIA HIGH SCHOOLS ARRANGED IN ORDER OF THE SCORES MADE IN THE GEOMETRY AND ALGEBRA TESTS

Geometry		Algebra	
1. Germantown (Mixed)	50.8	Kensington (Girls)	7.7
2. William Penn (Girls)	49.0	William Penn (Girls)	7.2
3. West Philadelphia H. S. for Girls	43.9	West Philadelphia H. S. for Girls	7.0
4. South Philadelphia H. S. for Girls	42.5	Germantown (Mixed)	7.0
5. Frankford (Mixed)	35.0	South Philadelphia H. S. for Girls	6.9
6. Kensington (Girls)	27	Frankford (Mixed)	6.8
7. Northeast (Boys)	27	West Philadelphia H. S. for Boys	6.7
8. South Philadelphia H. S. for Boys	22.1	South Philadelphia H. S. for Boys	6.4
9. Philadelphia H. S. for Girls	21.9	Philadelphia H. S. for Girls	6.4
10. West Philadelphia H. S. for Boys	21.8	Central (Boys)	6.3
11. Central (Boys)	21.7	Northeast (Boys)	6.2
Median for Philadelphia	28.3		6.8
Standard	39.3		7.8

RECAPITULATION

1. Standards should be established as to the curriculum in mathematics, and in the time-allotment for the various subjects, to be applied uniformly to boys' and girls' schools and classes.

2. The teaching roster for heads of mathematics departments should be fixed at 15 class-periods per week, and the tenure of positions as heads of mathematics departments should be made conditional upon successful performance of the higher duties of the position.

3. A mathematics course including the fundamental notions of algebra, of intuitive geometry, of numerical trigonometry, and of demonstrative geometry should be required of all pupils in the first year.

4. Opportunity should be afforded pupils in all high schools to continue in later years the study of plane and solid geometry, algebra, trigonometry, and such other mathematics subjects as may prove to be desirable for particular schools or groups of pupils.

5. Girls should be afforded opportunities equal in all respects to those afforded to boys for the study of mathematical subjects in the high schools.

6. Work now being given with the specific aim of preparing for college entrance examinations—"cramming for the examinations"—should be discontinued, and replaced by instruction in subject matter immediately worth while to all pupils.

7. Administrative officers should encourage activities on the part of the body of the teachers that may tend to bring about a professional attitude after the work of the high schools.

8. Mathematics classes should be arranged on the basis of pupil ability—particularly in the early years of the high school, when the pupil-body is most numerous.

9. Adequate supplies of textbooks and supplementary materials—books, periodicals, instruments—should be assured every high school by the business administration of the Board of Education promptly on requisition.

10. The systematic use of standardized tests should be made a regular part of the administration of the high schools.

11. Opportunity should be given in summer schools to make up failures and to do advanced work in mathematics.

ADDENDA

1. The Superintendent of Schools states that the installation of a research department has been recommended, in order to utilize Standard tests and to make use of the results in daily practice.

2. The Superintendent of Schools states that the new course of study is securing a much greater degree of coördination than existed at the time the Survey was made.

3. The Superintendent of Schools states that the difference in time-requirement here spoken of is overcome by the new course of study.

4. The Superintendent of Schools states that summer schools have been approved for 1922, and appropriations made for them.

CHAPTER X

MUSIC*

Introduction.—Music in the School Curriculum. The place of music in the public school's curriculum is firmly established and universally recognized. It is taught daily in practically all cities of 30,000 population and upwards in the United States and in most of the small cities and larger towns. A recent act of the Pennsylvania Legislature provides that music shall be taught in every elementary school of the State, both public and private. The teachers of the State are now being given the necessary training making possible the carrying out of the provisions of this law which include the teaching of music in all the rural schools of the State. Music is now generally recognized as a universal human need and no longer as a luxury for the few. It is fitting therefore that the capacity to appreciate music shall be developed during childhood when the reaction to musical stimuli is unfailing.

The policy of the State, and of the city of Philadelphia, which now includes preparation in music as one of the requirements in the certification of every teacher in the elementary schools, will greatly improve the quality of music teaching. Everywhere children are eager for music. Where adequate time and equipment are provided and the teachers are properly trained, the music teaching in the schools brings incalculable benefit to the children and makes for richer home, church, and community life.

Owing to the absence of music from the schools of Philadelphia, and to the unusually large proportion of non-singing teachers in the schools, the introduction of music into the schools was attended by unusual difficulties. While Boston, Cincinnati, and other large cities introduced music into the public schools before the Civil War, it was not until 1898 that Philadelphia joined in the popular movement to include music in the school curriculum.

When in 1897 it was proposed to have music taught daily by the teacher in charge of each classroom in the elementary schools, very serious complications immediately developed owing to the opposition of the teachers. They resented the attempt to compel them to teach a subject requiring extra work and preparation, concerning which most of them knew little or nothing, and which was then looked upon as a "frill."

This attitude has long since disappeared. Music in the schools is now welcomed by teachers, pupils, and parents. Aims, procedure,

* See Addendum.

and attainments have been systematized and standardized so that music is now recognized as an essential in every modern system of schools.

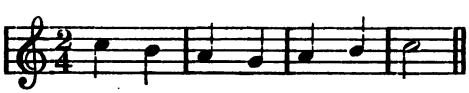
Music in Primary Grades. The teaching of music to little children is strikingly parallel with the generally accepted methods of teaching Primary Reading. During the three or four years of his use of the spoken language, the child gains remarkable facility in thinking and speaking by imitation and observation, prior to beginning the study of reading. A similar experience is now universally considered necessary as the first step in learning the "tone language." Following is the usual procedure:

A large number of suitable songs, fifty to one hundred in number, are learned by imitation during the first two years. This experience is vitally essential and, among several important aims, the following are accomplished:

1. The use of the singing voice and the formation of safe vocal habits in the production of pleasing, musical tone quality.
2. The ability to recognize and sustain musical tones, selecting them from the very large number of changing tones employed in speech.
3. The use of the tonal and rhythmic elements employed in music, thereby developing the tonal and rhythmic sense.
4. The awakening and stimulating of interest in and attention to music.

Through the self-playing instruments now generally employed in the beginnings of music teaching in the schools, little children are enabled to hear real music and are led thus early to love and appreciate the beautiful in the art.

Music and Reading. The improvement in the teaching of music reading to the little child in the public schools is quite as radical and striking as has been the improvement in the teaching of Primary Reading during the same period. The underlying reason for the astonishing progress in Primary Reading is evident. Advantage is fully taken of the child's knowledge of words and his ability to think and give expression to his thought. The learning process in Primary Reading and in the reading of music are startlingly similar. The symbols "I see Fanny" in the form of words, lead the child to hear these words through the "inner ear." The symbols

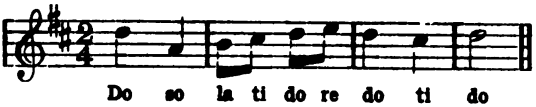


likewise lead him to hear these tones and feel the rhythmic swing in his inner consciousness. In each case, he grasps the thought as one idea—

not from letter to letter or from note to note as did the children in the past generation.

Where both Primary Reading and Primary Music are properly taught, the third grade child glances at the sentence, looks away and says, "The sun shines in the east," freely and rapidly. In the same way he glances at

looks away from the book or blackboard and sings rapidly and freely



In both instances he is getting definite thought from written or printed symbols. Progress in both languages depends upon gradual and steady growth of the reading vocabulary, which is dependent upon the speaking and thinking vocabulary. In the one case the knowledge of the sound and meaning of words precedes their recognition through symbols; in the other the knowledge of tones and rhythms acquired through hearing, precedes their recognition by means of symbols.

Pleasant memories of the reading class, the reaction to suitable interesting material (including that committed to memory), pleasing tone quality, natural modulation of the speaking voice, all have a vital influence upon the taste for reading and upon the habits of silent and oral reading which the child carries with him through the upper grades.

Similar pleasing experiences and memories of the music period, the natural reaction to skillful music teaching and to suitable song material read and committed, pleasing tone quality, good vocal habits, and beautiful music heard and produced, all have an equally vital and lasting influence upon the musical taste and upon the appreciation of the beautiful in music which the child carries with him into adult life.

Once the power to get definite musical thought from the musical symbols is attained, rapid progress in sight singing is assured. Careful attention to the use of the light, musical head-tone quality assures the free and natural use of the child's singing voice; intelligent use of much good song material ensures the development of love and appreciation of music. Steady and rapid development of power and skill in sight singing and facility in expression, as well as the ability to get pleasure from hearing music, should result from the years devoted to music in the grades.

Six Year Attainment. At the end of the sixth year in school, the results of intelligent and well supervised music teaching form an excellent foundation for any and all kinds of musical education. The attainment after six years in school is summarized by the Music Supervisors' National Conference as follows:

First—Every child shall have acquired the use of his singing voice and pleasure in song as a means of expression.

Second—Every child shall have acquired a repertoire of songs which may be carried into the home and social life.

Third—Every child shall have learned to enjoy music as something heard as well as expressed.

Fourth—Every child shall have developed aural power to know by sound that which he knows by sight and vice versa. Every child shall have acquired the ability to sing at sight, using words, a unison song of hymn-tune grade; or, using syllables, a two-part song of hymn-tune grade and the easiest three-part songs—these to be in any key, to include measures and rhythms in ordinary use, to contain accidental signs and tones easily produced, and in general to be of the grade of difficulty of folk songs such as "The Minstrel Boy"; also knowledge of the major and minor keys and their signatures.

Fifth—Every child talented in musical performance shall have had opportunity for its cultivation.

Sixth—The children shall have developed a love for the beautiful in music and taste in choosing their songs and the music to which they listen for the enjoyment and pleasure which only good music can give.

Seventh—The children shall have acquired the ability to appreciate the charm of design in songs sung; to give account of the salient features of structure in a standard composition after a few hearings of it; to identify at least the three-part song form from hearing; and to recognize and give titles and composers of a reasonable number of standard vocal and instrumental compositions.

Eighth—Above all, the children shall have arrived at the conception of music as a beautiful and fine essential in a well rounded normal life.

In the light of this preliminary statement, the aims, procedure and attainments of music teaching in the Philadelphia schools and the general conditions surrounding and controlling may now be considered.

Administration and Supervision. The system of music teaching now in use in the Philadelphia schools has been in operation with practically no change for more than twenty years. During this time very close and loyal following of the system has been maintained on the part of assistants and teachers. The records of the department of music

include detailed information concerning the musical conditions prevailing in each school, concerning the work of all assistants and of the thousands of grade teachers. The remarkable manner in which the system functions throughout the nearly 5000 classrooms in the elementary schools, in the girls' high schools, and the City Normal School is unique in the history of school music.

Nowhere has the surveyor observed greater loyalty to the directing authority on the part of assistants and teachers; nowhere has he seen so complete and strict adherence to prescribed procedure, even to the form and content of question, answer, and all other detail.

The system works uniformly in all the elementary schools. The same activity is in operation, the same questions are asked in exactly the same way, the answers are uniform, the same blackboard material is found on the boards in all rooms of similar grade, and the same procedure is followed in its use; the same method is followed in the use of books down to the last detail. Assistants, teachers, and children follow the system loyally, without deviation.

Supervision. There are 4842 classrooms in the first eight grades of the elementary schools in each of which music is scheduled to be taught daily. The director of music has nine assistants to supervise the music teaching in these 4842 classrooms, an average of 538 rooms for each assistant. According to the records of the department of music, the supervisors visited each room last year an average of 3.7 times, remaining not longer than twelve minutes, the scheduled time for the music lesson.

Because of an inadequate number of assistants, on October 1, 1920, there were 2721 classrooms which had not been visited by the supervisor; on November 1, two months after the schools opened, 1112 rooms had not been visited; on December 1, 433; and on January 1, 279. On February 1, when all classes change because of the semi-annual promotions, many classes had had no supervision whatever for the half year, and thousands had received but one visit. Twelve hundred and twenty-four teachers were new to grade and five hundred and eighty-seven classes were taught by substitute teachers. These conditions make successful work in music impossible. Efficient supervision is unachievable with the present number of assistants.

The assertion is often made and sometimes given credence, that superior results in music cannot be obtained in a very large system of schools. This is not true. With a sufficient number of capable assistants the music teaching in a large city can be made to function as successfully as in a small system. The large city problem is simply a duplication of units. If a director of music with two assistants can organize and administer successfully the work of teaching music in a city employ-

ing 500 elementary teachers, the efficient supervision of 4842 teachers is equally practicable, providing only that a sufficient number of capable assistants are employed.

The supervisor must have at least twenty minutes to render proper and effective assistance during the visit to the grade teacher. Allowing a minimum of time between lessons to get from room to room and making allowance for a daily assembly, twelve classrooms is the maximum number which can be visited in a day. Efficient supervision demands a visit by the supervisor at least once in three weeks. On this basis the supervisor can visit one hundred and eighty classrooms in three weeks. Therefore a supervisor is needed for every 180 teachers, or 27 supervisors for the 4842 classrooms. This number does not include the teachers in the normal school, the substitute teachers or the supervisors of instrumental music.

Time Allotment. Twelve minutes a day is allotted to music in the Philadelphia schools. In the 656 part-time classes, seven minutes is the allotted time. Considering that individual work is vital to efficiency, the time allotment is entirely inadequate and would of itself be an effectual bar to successful music teaching in the grades. The actual time given to music averages much less than twelve minutes per day. Owing to existing complications in the roster of many schools, the upper grades, especially the eighth grade, sometimes get little or no music for months.

The time allotment for music suggested for the schools of Pennsylvania, by the Department of Public Instruction, is twenty minutes a day for the first six grades, and for the junior high school, two thirty-minute periods (required), in addition to elective courses.

Procedure. Because of inadequate time allotment and supervision the scope and variety of musical activities in the grades are very limited. These limitations and the remarkable uniformity of procedure already mentioned, make evaluation of the music in the elementary schools a much simpler problem than is ordinarily presented by a large system. The observer, listening to the music lessons in the eight grades of one school under the direction of one assistant, finds exactly the same procedure in the next school under another assistant, and so on.

Kindergarten. Music in the kindergartens is greatly in need of supervision. No supervision whatever of the two hundred and seventy kindergarten classes numbering 8200 children is undertaken by the department of music. This is most unfortunate because the children in the kindergarten classes do a large amount of singing and unless properly taught are bound to form harmful vocal habits. While the

kindergarten teacher has usually had thorough professional training, her musical training and experience is ordinarily not such as to fit her for teaching music. Her musical training should be supplied by the City Normal School, where it is entirely feasible to offer a course in music for the kindergarten teacher that will fit her to teach music acceptably. She needs expert assistance in "curing" the so-called monotones, in caring for the singing voice of the child, in the selection of suitable songs, and especially concerning the proper key and compass of songs. Usually the first songs used by the kindergarten teacher are too difficult and too long. Instead of working individually with the non-singers, thereby eliminating them by the middle of the year, she uses the piano in teaching the songs and allows many children to "talk" or "monotone" the songs.

Allowing the child to "monotone" songs for any length of time, deadens his tonal sense and hinders rather than helps him to become a singing child. Constant use of the piano before the words are learned, aggravates the evils of mispronounced and misunderstood words and wrong tones and rhythms so common in the kindergarten. While she is playing the accompaniment, the teacher cannot listen properly to the class singing. This is in no way to be interpreted as a disapproval of the use of the piano for accompanying songs in the kindergarten. When the voices are "in tune" and the words and melody learned, the piano accompaniment is most desirable.

Primary Grades. During the first year (first grade) the daily music lessons consist of "ear interval work" and "eye interval work." The first lesson, or "problem," given the first grade, aims to teach the class to recognize the ascending and descending scale sung by the teacher. The second "problem" teaches them aurally to recognize and sing the first and second tones of the scale; the third "problem" to recognize, name, and sing the first three tones of the scale from hearing, and so on.

The "ear interval work" of the first third of the year is the aural recognition, naming and singing of the first five tones of the major scale in conjunct succession and the first four tones in both conjunct and disjunct succession. The "eye interval work" aims to teach the pupils to recognize, name, and sing these tones by means of staff representation on the blackboard.

The aim during the second third of the year is to accomplish the same result with the four upper tones of the scale.

The last third of the year deals with the eight tones of the major scale in like manner.

The supervisors and teachers follow literally and in detail the

"Manual of Instruction in Sight Singing including Working Specifications and Illustrative Lessons for the use of Teachers."

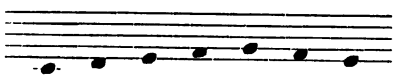
At the end of the first year, as stated on page 179 of the First Year Manual (after solving one hundred twenty-five "problems"), the pupils are supposed to be able to sing at sight:

a. All possible combinations of the first four tones of the scale.
b. All possible combinations of the second four tones of the scale.
c. All possible combinations of the tones of the united halves of scale in disjunct union, with the tones in each of its seven positions.

Repeated tests by the surveyor disclosed that the pupils at the end of the first year are not able to recognize and sing from sight or hearing simple combinations of scale tones either conjunctly or disjunctly unless they are taken in exactly the same order in which they have been presented throughout the year.

The "ear interval work" is conducted as follows:

An exercise is represented on the blackboard—dots looking like quarter notes without the stem placed on a staff without clef, key signature, or bars, thus



The teacher sounds the pitch of "one" and points very slowly from note to note, the class singing the syllable names. Then the exercise is sung backwards very slowly. Different combinations of the first five scale tones are used throughout the year as given in the manual. Each staff degree is taken as "one," the seven different "positions" being used to represent "one."

First position of one—line below
Second " " " —second line
Third " " " —space below
Fourth " " " —second space
Fifth " " " —first line
Sixth " " " —third line
Seventh " " " —first space—thus following the sequence of keys in sharps.

The two activities, "ear interval work" and "eye interval work," constitute the main part of the work in the first three grades.

A feature of the "eye interval work" is that the class nearly always sings in a low pitch from middle C to second space A or lower, regardless of the location of the key tone as represented on the staff. The Manual

makes this obligatory as follows: "So-called 'true pitch' should not be used. The exercises have been purposely transposed from their original setting into such keys as will keep the pupils constantly reading from all the lines and spaces of the staff, and an attempt to sing them in 'true pitch' would be unwise."

This practice is exceedingly harmful to the ear and to the voice. It is injurious to the ear because singing constantly in a different key than the one indicated gives a wrong impresson of pitch, and thereby misleads and destroys the child's sense of pitch instead of educating it. If the representation sensed by the eye always agrees with the pitch which is sensed by the ear, a large number of children acquire a sense of absolute pitch; and those who inherit absolute pitch, will not have it impaired and confused.

Constant practice in using the lower register exclusively is harmful to the voice of the child, especially when the studies ascend from a low pitch and are restricted most of the time to the octave. This continued use of the lower tones of the child voice, as practiced in the first three grades throughout the city schools, seriously violates the first and most important rule governing the care of the child's singing voice, viz., Use the light, head tone quality exclusively and avoid the "lower thick, chest" quality. The latter is sure to develop through the continued use of the lower tones, especially when the head voice is neglected as is the case in these schools.

Song Singing Omitted. Perhaps the most unfortunate and serious feature of the music teaching in the primary grades is the entire absence (from the teaching plan) of rote songs. "Rote work" is mentioned in the Manual but no rote songs are taught during the music lesson. The supervisors, and the teachers who were asked concerning rote songs, were unanimous in saying that no rote songs are taught in the music period. The singing of songs has no place in the music lessons in the first four grades in the Philadelphia schools. Whenever the surveyor asked for a song in these grades, the class would sing some popular song which most of the class knew, or some song sung at the assembly period with a chorus of one hundred, two hundred, or three hundred children. These songs were started by the children or by the teacher without use of fork or pitch-pipe. In most cases the compass was very low, sometimes reaching to A and G below the treble staff. The supervisors never teach a song in these grades and no teacher is asked or expected to teach a rote song as a part of the music lesson. Even in the fourth year the words of the songs studied are not sung. This is contrary to the generally accepted practice which provides for song singing as the principal activity in the primary grades.

Measure and Rhythm. "Ear rhythmic work" is scheduled as a part of the first year activity, but the desired results are not obtained, as little attention is actually given to rhythm and every exercise is taken so slowly that all sense of motion is lost.

During the second and third years, studies in metric form are placed on the blackboard. The practice is to begin at the last section, the teacher pointing from note to note very slowly, the class singing with the syllable names. After the last section is sung, the teacher begins with the preceding phrase and goes slowly to the end, and so on. This is designated "Development Work." Because the study is nearly always too difficult for the class to read and because the teacher points from note to note very slowly, there is no opportunity to develop the rhythmic sense. Later the same blackboard exercises are used for "ready reading." Because of the very slow tempo and the habit of reading from note to note, this activity also affords no opportunity for the development of the rhythmic feeling.

Inasmuch as rhythm is the vitalizing element in all music, essential to its life and to its very existence, the virtual omission of the rhythmic element from the singing in the lower grades of the Philadelphia schools is fatal to all healthy growth, not only of sight singing but of music appreciation. Limiting the work in music to the slow, halting, unrhythmic drill upon unmusical and uninteresting sight reading material, also destroys interest and makes the music period a dreary, lifeless experience.

This exceedingly slow tempo characterizes the singing in all grades from the first to the eighth inclusive. The classes visited invariably sang in a very slow tempo. The pupils seemed to lack rhythmic feeling —the sensing of the rhythmic swing of the music which is the necessary foundation for the study of all rhythmic problems. Lacking the rhythmic element that makes possible a steady tempo, the teaching offers no chance for the awakening and development of the feeling for rhythm.

The child or adult whose rhythmic sense is dormant, who does not react to rhythmic stimuli, is seriously handicapped at every turn. Rhythmic reaction is necessary not only to music but to speech, to oratory, to the drama, to prose as well as poetry. Physical, mental and emotional reaction to silent and oral reading, for example, is strengthened and intensified by the ability to feel the rhythmic swing of the meter and of the rhythmically balanced sentence. An important element in the power of the orator or the actor is the charm of cadence, the balance of phrases, and the rhythmic nuance of tempo and of sound. The capacity for rhythmic feeling is alike essential to the speaker and to the listener.

Especially is a feeling for rhythm necessary to the appreciation of music. It is a necessity for the listener and for the performer. Music

without rhythm is not music—only the skeleton remains. Rhythm is the life principle, the pulse of music. When rhythm ceases, life departs; when the pulse stops, life is extinct.

Leading Questions. The music teaching in the grades is very seriously handicapped by the method of questioning which prevails.

The detailed directions given in the Manual for the first three grades include the exact form of question and answer. These stereotyped forms are followed closely by the supervisors and teachers. Unfortunately the questions are very largely the type known as "leading questions."

The use of this form of question and answer is largely accounted for by the unusual situation which confronted the Director when the system was introduced. It was not possible to secure an adequate number of assistants. The subject was new to the grade teachers and a large number of them were sure they could not teach music. Therefore a procedure was designed and adopted relieving the teacher of all responsibility and providing mechanical devices usable by the untrained and unmusical teacher. This arrangement enabled the music to function in the schools and relieved a serious and difficult situation.

As a consequence, the Manual used by the grade teachers sets forth the procedure in a manner that unwittingly violates a fundamental principle of the teaching process in the employment of leading questions which suggest the answer.

As an illustration of this form of recitation, attention is called to the method of drilling upon note values. The notes for drill purposes always appear upon the blackboard in the same order. It is evident therefore that the answers, repeated very often, for a couple of years, become more or less automatic. Several third and fourth grade classes were tested by the surveyor in the following manner:

Taking the pointer, he said to the class, "A quarter note is the picture of a one-swing tone. As I point to a note, please name the number of swings that it should receive." The pointer was then moved from one note to another in irregular order. In every case the class partially or wholly failed to give the correct answers.

The vital fact to be noted is that these symbols have no interest or significance to the child or the adult when detached from their practical application. Formal drills and questions upon notes and rests, signatures, sharps, flats, and the like, are always deadening. Each symbol should be introduced when it is to be used, not before. Then its significance and usefulness are at once apparent to the child. After the introduction of any symbol its practical application should begin immediately and continue. Questions concerning it are unnecessary

because intelligent use of the symbol is the best possible answer concerning its meaning.

Instead of drilling upon notes, rests, signatures, etc., detached from their application, the children should be actually interpreting all these symbols while singing, thereby correctly answering all questions without their being asked. By constant use in songs and studies, these symbols become the medium of thought in the reading and writing vocabulary of the child, just as words spoken and written are the symbols of thought in the reading and writing of English.

All the questions which are constantly asked in the Philadelphia schools concerning the number of beats in a measure, the kind of note that has "one-swing," the number of flats or sharps in the signature, etc., are answered correctly or incorrectly the moment the child begins to sing. If the child is able to sing the music at sight the teacher needs only to indicate the tempo and sound the key tone. If the child takes the first tone correctly, sings the right tones, gets the proper accent and rhythm, pronounces the words correctly and produces good tone quality, he has answered correctly all possible questions without a formal question having been put to him. Only when he makes a mistake is a question necessary or desirable. The nature of the mistake should determine the character of the question. Instead of a "leading question," it should be one to stimulate thought and lead to correction of the error.

Music in the primary grades is a habit-forming subject—a skill subject, not a knowledge-gaining subject. Habits are formed and skill is acquired by doing. What knowledge there is to be gained is incidental and should come through the doing and as a part of it. The pupils are given a daily period of technical drill which is harmful to the singing voice, to the musical sensibilities, and to their conception of music. They should be given a large repertoire of beautiful songs with text and music adapted to the age and taste of the child, sung with keen interest and enthusiasm, with a light, musical tone quality, stimulating love and appreciation of the beautiful in music, and laying the foundation for a permanent interest in the art.

The Child Voice. The children in the primary grades in the Philadelphia schools are using the lower part of the singing voice almost exclusively. The unfortunate and serious results of this practice are evident throughout the eight grades and in the high schools and normal school. The lower voice is overdeveloped and forced upward, causing coarse, harsh tone quality. Singing habits evidenced by the squeezed throat, stiff jaw and tongue, and other evils which follow the misuse of the child's singing voice, are prevalent to an alarming extent in the Philadelphia schools.

The success of vocal teachers, the progress of vocal students, and the future of American singers are all jeopardized by the antiquated and long abandoned practice of allowing little children to sing daily for months and years in the lower register from middle C and below. Because of the forced tone, the class almost invariably falls from the pitch as the lesson progresses. The evil is aggravated in all grades because the assistants and teachers use a C-fork instead of a chromatic pitch-pipe, and because little attention is paid to compass, or to falling from the pitch.

Many teachers and some of the assistant supervisors strive hard to secure good tone quality and in the upper grades especially, get fairly good results. But they work under a great disadvantage and are handicapped because of the constant use of the lower voice in the lower grades.

Upper Grades. The teaching plan for the upper grades differs very little from that used in the primary grades. Beginning with the fourth year, the children sing from a book instead of from the blackboard; this is the principal difference. The same note-to-note reading, both "development" and "ready reading" and the same drills on notation are continued.

The progress of the sight singing in the upper grades is seriously impeded by the practice of placing texts in the hands of pupils which are too advanced for the stage of the pupils' musical development.

Individual Singing. Individual singing is omitted from the elementary school as it is felt that the very limited time allotment makes individual work impracticable. This is a serious mistake as individual recitation is as essential in the music lesson as it is in any other subject.

The course of study unanimously adopted by the Supervisors' National Conference at St. Joseph, Mo., in April, 1921, formulated by leaders representing all schools and methods in general use in the United States, gives individual recitation a prominent place throughout the eight grades. In the opinion of these authorities satisfactory results cannot be obtained without individual recitation. Only through individual recitation can the pupil develop skill, confidence, and independence of thought and action. Class sight singing means that a comparatively small proportion of the class is doing the actual reading; the majority are of necessity following the leaders. This form of recitation has its advantages in giving confidence and momentum to the weaker members of the class and is useful and desirable a part of the time. When used exclusively, however, great injustice is done to a large percentage of the pupils. With equal consistency might the teaching of primary reading be restricted to concert recitation. Only

through individual recitation can a teacher learn the many details concerning each pupil, which must be known if the pupil is to progress satisfactorily.

Music Appreciation. A serious omission in the teaching of music in most of the schools is the lack of music appreciation work. Because of the very limited time allotment for music this important feature of school music is largely omitted. Teaching children to listen attentively and intelligently to music, to know something of its form and thereby to learn to love and appreciate the beautiful in music, are aims quite as important and vital as the teaching of sight reading. Twenty years ago, when the Philadelphia system was inaugurated, attractive, educative, progressive and systematic listening lessons throughout the grades were not possible. With the perfection of self-playing instruments, a great variety of good music is now available for the schools, by means of which good music may be presented to the child in an attractive and useful way. Music in the schools is now conceived as something to be heard as well as to be read and expressed.

Music appreciation should begin in the kindergarten and continue through the high school. The player piano and phonograph, supplementing the music which can be produced by the classes and by local artists, bring a wealth of music to the classes in music appreciation and music history. The pupil is taught to listen and through intelligent listening becomes an interested and enthusiastic music lover and patron of music.

The Course of Study lately adopted by the Music Supervisors' National Conference, to which reference has already been made, strongly recommends that a phonograph and library of records of good music shall be a part of the equipment of every school.

There are upwards of 1000 floors in the 348 school buildings. At least one phonograph on each floor is a necessity. These instruments are exceedingly valuable in many ways and are considered a part of the necessary equipment of a modern elementary school. At present there are about two hundred phonographs in use in the entire system.

Assembly Singing. Daily assembly is held in all the grade schools varying in length from eight to fifteen minutes and in some cases to thirty minutes. Reading from the Bible is required. Most of the schools have assembly singing of one or more songs. This is of little value to the primary grades as at present conducted for there is no time nor suitable opportunity at the assembly period to teach rote songs, and no songs are taught during the music period. Community singing of popular songs is about all that is possible under present conditions.

The potential benefit of assembly singing is much greater in the

upper grades. If suitable and adequate song material were provided, much could be accomplished. Some of the schools are getting good results in the assembly period. Much more could be done if a definite minimum time for singing were fixed.

Departmental Schools. Sixty-nine of the two hundred and ten schools are working on a departmental basis. One hundred fifty-two teachers are doing the music teaching in these schools. Obviously the teachers best qualified by nature, training and experience should be assigned as special teachers of any subject. Because the principal usually exercises his prerogative in the assignment of teachers of music, the music teaching suffers severely in a large proportion of the departmental schools. According to the rating of the department of music, only thirty-six out of the one hundred and fifty-two teachers assigned to teach music were among those who had demonstrated strength in the teaching of music. The best interests of the children and of the music teaching demand that departmental teachers of music be chosen with the approval of the director of music.

Unfavorable Conditions. Several of the undesirable features of the music in the grade schools are largely due to conditions which have been beyond the control of the director, viz., the introduction of a new subject into a large system with insufficient supervision; the necessity of having the teaching done by teachers most of whom were not acquainted either with the subject matter or methods of teaching; the small and inadequate time allotment; the lack of material equipment.

Conditions Now Improved. Music in the schools is now considered a necessity. The ability to teach the subject is one of the requirements for every elementary teacher's certificate. Teachers now expect to teach music and welcome training in the subject.

Courses of study in music have lately been standardized. A course for the eight grades in the public schools prepared and accepted by representatives of all the leading systems in use in the schools of the United States, has been adopted by the State of Pennsylvania. The Superintendent of Schools of Philadelphia and the Director of Music are already coöperating heartily in the effort to put this standard course into operation in the schools of the entire state including Philadelphia.

With an increased time allotment, an adequate number of supervisors and sufficient material equipment, great improvement can be brought about quickly. The unusual talent of the director for organization and administration so necessary in a large system, the loyalty and earnestness which exist among the teachers throughout the city, and the excellent discipline which prevails, are all important elements of success.

Music in the High Schools. There are two important periods of musical education in the schools—the grades and the high school. In the grades the child should acquire right vocal habits resulting in an acceptable use of the singing voice, the ability to read music at sight, a liking and preference for good music, acquired through singing, playing, and listening.

The high school period should offer opportunity for advance study —more intelligent appreciation, perfection of technique, and development of individuality. To give instruction in music in the grades and omit it from the high school is to lose a large part of the valuable results of the elementary training and forfeit the opportunity for musical development during the most favorable period. If the public high school is really to give an equal opportunity to all, it must provide for the very large group to whom music is the most important vocational or avocational element of instruction.

To this end elective credited courses should be offered in all the eleven high schools, enabling musically talented pupils to major or minor in music. These courses should include Organized Chorus, Elementary Theory and Sight Singing, Dictation and Melody, Harmony, Music History and Appreciation, and Orchestra.

Boys' High Schools. The entire absence of music from the roster of the boys' high schools is most unfortunate. No provision is made for the musical education of the nine thousand Philadelphia high school boys during the years when musical training is most valuable and therefore most desirable.

Girls' High Schools. The five girls' high schools numbering 8704 students and the coeducational schools numbering 4690 students, are almost as badly off musically as are the boys' schools. While music is scheduled one period a week during the four years, it is often crowded out entirely from a student's program because of conflicts, of insufficient number of music teachers, or because of lack of interest in the subject on the part of persons in authority.

These unfavorable conditions compel the one music teacher in a large high school of from two thousand to three thousand students so to plan the work that the course amounts to very little from an educational standpoint. The learning of a few songs by all sections, largely by rote, to be sung later in assembly by the entire school, is about all that is accomplished or could be accomplished under present conditions.

Considering these limitations the teachers of music in the Girls' High Schools are doing all that could be expected. Some are getting surprisingly good results, considering the limited time and opportunity.

The West Philadelphia High School, for example, has excellent chorus singing.

Outside Activities. Each of the boys' high schools usually has a glee club under the direction of a member of the faculty who is a teacher of some other subject. Three have orchestras, also organized and directed by teachers of other subjects. The orchestras in the Central and South Philadelphia schools have lately been discontinued. All rehearsals are held outside of school hours and no school credit is given. The arduous work of organizing and directing these organizations is purely voluntary on the part of the teachers who take on this extra work in addition to their regular duties. This spirit is most commendable, as are the results in several of the schools, notably the West Philadelphia High School, which has an excellent orchestra. Many boys have received valuable training in these orchestras which has enabled them to become members of professional organizations, including the Philadelphia Orchestra.

All of the girls' high schools have glee clubs. Some of them maintain a selected chorus, notably the Philadelphia High School for Girls. There are no orchestras in the girls' high schools. The music club of the West Philadelphia High School for Girls is composed of singers, violinists, and pianists. They give a weekly musical program.

The Frankford High School maintains an Orchestra, Banjo and Mandolin Club, Glee Club, and chorus of mixed voices. Several members of the faculty contribute their services in the organization and direction of these organizations, which are all fostered and financed by the Fathers' Association of the Frankford High School, a most interesting and progressive organization. A member of the Philadelphia Orchestra is employed by the Fathers' Association to instruct and direct the orchestra. This is exactly the kind of instrumental instruction needed in all the high schools.

These outside activities have been beneficial to the pupils and the schools; they form a nucleus for organized, credited courses in vocal and instrumental music which are sorely needed in each of the eleven high schools.

Unusual Advantages. Philadelphia offers a peculiarly attractive field for high school music. With one of the world's greatest orchestras available, the Philadelphia Orchestra Association, the Music League and other musical organizations ready to coöperate, a series of orchestra concerts should be given annually for the benefit of the pupils. Study of the programs and of the composers represented would naturally precede each concert in each school. With the active assistance of several strong musical organizations which are intensely interested in

this particular phase of musical education in the public schools, the enterprise could be made a most valuable means of musical uplift of the entire city. Incalculable benefit to the pupils in the schools, the education of future patrons of music, material increase of patronage of the orchestra, and a splendid stimulus to musical interest and enthusiasm throughout the city would certainly result from such coördination of effort on the part of the school and the musical organizations and artists of the city. The opera and concert audiences of tomorrow are in the city schools of today.

It is gratifying to note that a beginning has been made this year in providing orchestral concerts for the high schools at a nominal expense. The Philadelphia Orchestra is giving a series of three concerts exclusively for pupils in the schools; the programs and composers are being studied prior to the concert and explanatory talks employing the phonograph are being given in the high schools. Owing to the late start and to the miscarriage of plans for the distribution of tickets this year's series has not been fully successful. Steps are already being taken looking to a more comprehensive plan for next year. The aims of the Philadelphia Music League include this and several other movements looking to the coördination of the musical organizations of the city with the public schools.

Instrumental Music. Conditions in the Philadelphia schools are particularly favorable for the inauguration of a department of instrumental music, of piano and violin classes, classes in other orchestral instruments, school bands, and orchestras. The logical beginning of this important feature of school music is the appointment of teachers of instrumental music for the grade schools, of a special teacher of instrumental music for each high school, and the purchase of certain non-solo orchestral instruments to be owned by the schools and loaned to the pupils.

The results of instrumental teaching shown in the grade and high school band and orchestra, and in classes in other orchestral instruments which are the natural outgrowth of instrumental instruction, are varied and important. Musical talent is discovered, a large proportion of the players eventually study with private teachers, band and orchestra players are developed instead of imported, music in the home is enriched, musical taste is improved, and interest in and patronage of good music are increased.

School Credit. Very large numbers of pupils would elect courses in music were they offered and credited as is now the rule rather than the exception in the United States. The report recently issued under the United States Bureau of Education shows that of 359 high schools

reporting, 262 allow credit for music. The amount of credit varies widely from a minimum of one unit to a maximum of four units on a basis of sixteen units for graduation.

Credits for Outside Study of Music. Music is the first educational interest of many of our young people and should be recognized as an integral part of their education. Until provision is made in our public schools for instruction in music as an educational unit of equal value with other subjects, justice to these pupils requires that they be given school credit for properly supervised work done at their own expense with private teachers. To this end the high schools should adopt a plan for proper crediting of music for pupils who wish to present music as an integral part of their individual curriculum.

Under present conditions in Philadelphia, a high school pupil desiring seriously to pursue the study of music must follow one of the three following plans:

1. He may try to carry the regular high school course while spending from nine to twelve hours per week upon outside study and practice of music. This plan results disastrously in nearly all cases. Either the academic work or the music is neglected, or else the student is overworked and suffers a breakdown in health.

2. The study of music may be discontinued during the four-year high school period. The years of adolescence are by far the most favorable for the study of music. Discontinuance of musical training during the four-year high school period causes a serious set-back to the musically talented pupil which is exceedingly unfortunate and in many cases irreparable.

3. The student may drop out of high school and devote all available time and strength to the study of music. By so doing he deprives himself of that general education which all should have and which is desirable for all and essential to any one who would enter professional fields.

The logical solution of this very serious and very common difficulty is the recognition of the study of music as a part of the school curriculum. Important and far-reaching results are attainable through this policy. They include—

1. Carefully planned courses of study
2. Evaluation of the private teacher's work
3. Supervision of the student's progress through regular reports from both parent and teacher and by means of annual examinations by a committee of musicians approved by the Department of Public Instruction.

Wherever credit for outside study of music has been properly con-

ducted, notably in Cincinnati, Louisville, Indianapolis, Lincoln, Oakland, Los Angeles, and many other places, the standard of private music teaching has improved steadily and rapidly.

The practice of crediting outside study is general throughout the United States. In 1920, 54 high schools in Western States reporting, 31, or 57 per cent, give credit for outside study and 26 own and lend to pupils certain non-solo orchestral and band instruments; of 207 schools in Central States reporting, 149, or 72 per cent, credit outside study and 65 own and lend instruments; 98 schools in Eastern States reporting, 27 or 28 per cent, give credit for outside study and 34 own and lend instruments. Remembering that the plan has been in operation scarcely a decade, the growth and extent of the movement is remarkable.

College credit for music, both for entrance and graduation is now the rule rather than the exception in the Middle West and Western States. Bulletin, 1921, No. 9, United States Bureau of Education, gives the following information: Of 419 colleges reporting, 247, or 59 per cent, offer credit toward the academic degree; 194 allow entrance credit; 113 allow two or more credits on a basis of 16 for entrance.

Employment of sufficient music teachers in the several high schools to meet the demand for musical instruction would not add materially to the expenses of the school, for the music courses would be elective and credited. More music classes would mean fewer classes in other subjects.

The City Training School. The Philadelphia Normal School numbers 525 students. Practically all of these students received their elementary and secondary school training in the Philadelphia Schools. More than ninety per cent of the teachers who are employed in the elementary schools receive their teacher training in the Philadelphia Normal School. Therefore the musical training of these students has a vital influence upon the music teaching in the city schools.

Assembly Singing. One period a week is devoted to music. The assembly singing is interesting and effective. The school is seated by parts and sings two and three-part music pleasingly. The songs are taught to the different sections during the weekly music period. Considering the length of time for preparation, the chorus singing is decidedly creditable.

Instruction in Music. The normal students are drilled in the system of music teaching taught in the city schools. They go over the same material in the methods class in the same way that it is taught in the grades—the same procedure, and the same subject matter that they

were drilled upon in the grades when they attended the elementary schools. The effect of the "ear interval work" and "eye interval work" upon the voices of these girls is significant. Constant singing in the lower compass of the voice develops a loud, strident, chest tone, that is not only unpleasant and unmusical, but decidedly injurious to the singing voice. Listening to a class of thirty normal students, drilling on the "ear interval" and "eye interval work" of the primary grades, one would suppose the voices were all big contraltos if it were not evident that the harsh, strident chest tones were unnatural and unduly developed owing to the continued use of the lower voice.

As in the city schools, no songs are taught in the methods classes. The method of teaching rote songs and the methods by which the tone quality most desirable for children's singing can be secured and maintained, are also omitted. Inasmuch as the singing of rote songs and the care of the singing voice of the child are at once the most important and the most difficult problems which face the teacher of music in the schools, the omission of these features from the normal training is most unfortunate.

The use of the light, head tone, the actual learning and teaching of rote songs, facility in the use of the chromatic pitch-pipe by the normal students, and the importance of good tone quality in the singing of children should be important features of the normal school course in music.

It is earnestly recommended that the normal school students be led to form the habit of using the light, head tone, that they be given abundant practice in the teaching of rote songs, in the use of the chromatic pitch-pipe, and that the proper care of the singing voice of the child be stressed and made clear in the classes of children used for practice teaching.

Considering that music is now a regular subject in the elementary school curriculum, that the teaching is done mostly by the classroom teacher, and that over 90 per cent of the teachers in the elementary schools of Philadelphia are taken from the Normal School, the very great importance of the musical training given here is obvious. Indeed the problem as far as new teachers is concerned, can be solved in the Normal School.

As has already been done in the thirteen Pennsylvania State Normal Schools, the time allotment for music should be increased, the music teaching force doubled, a definite musical requirement be made for entrance and for graduation and particular attention given to the music in the classes of children in the training school. This policy ensures the ability to teach music, comparable with the ability to teach other subjects in the curriculum.

RECOMMENDATIONS

1. The entire trend of music teaching in the primary grades should be changed. The teaching of rote songs should be the principal activity in the first grade and continued until the children are able to read the song material at sight.

2. Formal sight reading drills in the first grade should be abandoned. The study of sight reading should not begin until the child has had a rich experience in the singing of songs.

3. Only the light, head tone quality should be employed by the children in the primary grades, the compass to include approximately the tones represented on the treble staff—E flat, first line to F or F sharp, fifth line.

4. Each teacher of music should own and use a chromatic pitch-pipe instead of a tuning fork which is not a suitable substitute for the chromatic pitch-pipe.

5. The time allotment for music should be twenty minutes per day in the first six grades, and one hundred twenty-five minutes per week in the junior high schools.

6. In order adequately to staff the Department of Music, sixteen additional supervisors are needed for the Elementary Schools. The policy of the Board should be to provide this force as rapidly as possible. Five additional supervisors have already been authorized.

7. Music Appreciation should be introduced into the grades and into the eleven high schools. A library of records of good music should be part of the equipment and at least one phonograph should be provided for each of the 1000 floors in the elementary schools. At present about 200 phonographs are in use.

It is often found practicable to purchase both the phonographs and records from the proceeds of concerts and other school entertainments, thus gradually accumulating the necessary equipment.

8. Vocal, theoretical, instrumental, and appreciation courses should be established in all of the eleven high schools, enabling musically talented young men and women to elect music as part of their high school course with credit toward graduation. A sufficient number of capable teachers should be employed to supply the demand for music instruction.

9. Capable and experienced instrumental instructors should be employed making possible the organization of violin classes and classes in other orchestral instruments, grade orchestras, high school bands and orchestras, throughout the school system.

10. A plan should be put into operation in all high schools giving credit toward graduation for properly regulated and approved outside study and practice of music, enabling the pupils who aim to make music

a vocation or avocation to continue their musical education while in the high school.

11. Beginning with Grade 2A, all children throughout the grades should be supplied with suitable textbooks in music.

12. Not less than ten minutes should be devoted to the singing of songs in the daily assemblies in the elementary schools.

13. There should be at least one piano on each floor of every school building for use at the assembly period. Old and worn-out pianos, the use of which is seriously detrimental to the musical welfare of pupils and teachers should be eliminated.

It is recommended that an annual appropriation be made for pianos, looking to the purchase of the necessary piano equipment as soon as possible.

14. Departmental teachers of music should be chosen with reference to their musical ability, training and experience, with the approval of the director of music.

15. The selection of textbooks in music from the approved list should be made on the basis of the ability of the class, superseding the present practice of choosing books arbitrarily according to grades.

16. The course in music in the Normal School should be reorganized and suitable entrance and graduation requirements established so as to ensure successful teaching of music. This would require an additional teacher in the Normal School.

ADDENDUM

Since this survey was completed, a State Syllabus Committee of which the Director of Music of Philadelphia was a member, prepared a State Course in Music for the elementary and high schools of the State, which, when put into operation in the Philadelphia schools will, with its adoption by Pittsburgh, ensure unity throughout the Commonwealth in the subject of Music.

CHAPTER XI

SCIENCE

Point of View and Plan of this Report. The administration of each high school in Philadelphia as a separate unit has resulted in the case of science as of all other subjects in wide variations from the provisions of the City Program of High School Courses of Study. Many of these deviations from the offerings and requirements of the City Program have been in harmony with progressive developments in secondary education, while others are the natural outcome of a persistence in a belief in the traditional organization of the high school sciences which seeks "justification in the claim that the secondary course is introductory to more advanced study and as such should introduce the student to each of the leading phases of the subject." The survey found the conviction general among science heads and teachers that a reorganization of secondary science was needed. There is ample leadership among the department heads and teachers of science willing and able to work out such a reorganization of science in the Philadelphia high schools. The plan to centralize control of the high schools in the hands of the City Superintendent of Schools, if carried out as recommended elsewhere in the Survey, will facilitate such a reorganization of science. The material and observations gathered in the course of the science survey have therefore been presented from the point of view of such a probable reorganization.

The content of this report has been arranged topically as follows:

Steps in a proposed reorganization of secondary science.

1. Determination of general aims and purposes of science instruction.
2. General plan and sequence of science courses.
3. Agreement upon criteria for selection of subject matter.
4. Preparation of syllabus for each science course.

Character of science teaching.
Correlation of secondary science with elementary science.
Laboratory facilities and equipment.
Summary of recommendations.

Steps in a Proposed Reorganization of Secondary Science. The report* of the science committee of the National Education Association entitled Reorganization of Science in Secondary Schools embodies the results of seven years of study of the status of science in secondary

* U. S. Bureau of Education Bulletin No. 26, 1920.

schools. The general recommendations and principles of this report have been widely accepted by progressive teachers and school administrators and have provided a basis for an effective reorganization of secondary science in many school systems. This report is commended by the Survey Committee as worthy of careful study in plans for reorganizing sciences in the secondary schools of Philadelphia.

General Aims and Purposes of Science Instruction. A constantly recurring impression one receives in observing the science work of the Philadelphia high schools is the lack of controlling general aims and purposes that hold for all schools alike. Each high school has its own conception of what the aims and purposes of science instruction are and proceeds to organize the content and requirements of its science program accordingly. Some of the high schools, notably the South Philadelphia High School for Girls and the William Penn, have definitely oriented their science courses with reference to the general objectives of modern secondary education, while others still cling to the traditional objectives imposed by the formal organization of the sciences and by college entrance requirements. Obviously the first and most important step to be taken in the reorganization of the science work in the Philadelphia high schools is agreement upon the general aims and purposes of science instruction.

The general aims and purposes of science instruction should be in harmony with and directed toward the realization of the main objectives of secondary education.

The seven main objectives of secondary education as stated by the commission on the Reorganization of Secondary Education in its report entitled "Cardinal Principles of Secondary Education"* are

1. Health.
2. Fundamental processes.
3. Worthy home membership.
4. Vocation.
5. Citizenship.
6. Worthy use of leisure.
7. Ethical character.

In the realization of these objectives no other subject in the high school program of studies has more to contribute than science.

1. How to keep oneself physically fit, how to promote and maintain the public health are questions which vitally affect and condition the present and future of every one and must find an effective answer in the science instruction of every high school.

* U. S. Bureau of Education Bulletin No. 35, 1918.

2. In the teaching of the fundamental processes, such as reading, writing, arithmetic and elements of oral and written composition, the facts and wonders of science provide inexhaustible and highly motivated material. The fundamental facts and principles of science like those of health affect everyone of us, not merely on certain days of the week for restricted periods but every minute of every day and ought, therefore, to interpenetrate and color the material of instruction in other subjects. The work of science instruction should, therefore, include the effective correlation of the materials of science with the other subjects of the curriculum, particularly in the Junior High School.

3. Science has done much within recent years to make home keeping more efficient and therefore to make home life more comfortable and attractive. The high school teacher of science has no more fruitful field of service than in the extension and application of the principles of science to the activities that center around the life and management of the home. These activities have to do not only with problems of sanitation affecting the health of the members of the family but also with devices and methods that make for increased efficiency in the management of the home and for higher standards of human life in the families represented in the schools' clientele. To make every pupil an increasingly helpful and worthy member of his home is an important and fundamental objective of science instruction.

4. Science courses organized so as to show the practical applications of the principles of physics, chemistry, and biology to commerce, industry, and the home will provide much valuable basic preparation for life work, particularly of pupils whose formal education may not extend beyond the high school period. Science instruction should, furthermore, cultivate an intelligent appreciation of the important and indispensable part science plays in the development of both the human and material resources of our nation. The natural increase of our population and the rapid exhaustion of our vast virgin resources are bringing us speedily into competition on even terms with other nations; whereas heretofore our comparatively small population and our seemingly limitless supplies of raw material have given us a dominant, though unearned, position in the struggle for the world's markets. Science instruction in the high schools can do much to instill into our young citizens, prospective voters, an intelligent conception of the degree of our dependence upon scientific procedures and processes for the maintenance of the integrity of our national ideals and standards of labor and commerce.

5. We call a man a good citizen who shows a disposition to coöperate with his fellow citizens for the welfare of all. The coöperation of such a good citizen, however, becomes of largest value only as he learns *how*

to coöperate effectively. Good citizenship in other words depends for its effective exercise not only upon good will among the members of a community or commonwealth but also upon what Huxley called "organized good sense," by which he meant science. A citizen with an intelligent appreciation of the methods and processes of science recognizes in the neighboring swamp a civic problem demanding prompt and effective solution. His ignorant neighbor, though well disposed to his fellows, fails to appreciate the true menace of the swamp to the health of the community and is with difficulty, if at all, persuaded to support measures providing the necessary relief. If not a wide knowledge, at least an intelligent appreciation, of the procedures and processes of science must obviously be an essential and universal factor in citizenship training, if problems affecting community welfare are to be recognized by citizens as such and receive the prompt and effective solution they severally require, whether by individual action or by the action of the community as a whole.

6. No more certain means can be found of developing in pupils permanent and profitable sources of personal enjoyment and culture for a worthy use of leisure that the many pleasurable and useful avocational interests that may be established during school days as a by-product of science instruction. These avocational science interests will find their most effective and frequent expression probably in after-school activities such as are provided by science clubs, visits to museums and industrial plants, and excursions to near-by places of natural scientific value; and no teacher who appreciates their motivating influence upon the regular classroom science work, may wisely neglect these avocational interests.

7. Ethical character depends for its progressive development upon sound methods of thinking and is characterized by the quality of "suspended judgment" and an unswerving pursuit of truth. Science instruction provides valuable material and discipline for the development in its devotees of sound methods of thinking and fails in its major purposes if it does not inculcate love of the truth and the habit of suspending judgment on any matter until the pertinent facts are known. Science reveals the existence of certain fundamental biological, social, and ethical laws which we may not with impunity disobey and which not only command us, but teach us how, to lead a life of service to the full limit of our native endowments and circumstances.

RECOMMENDATION

General aims and purposes of science instruction should be developed in harmony with, and directed toward, the realization of the main objectives of secondary education.

General *Plan and Sequence of Science Courses in a Large, Comprehensive Four-Year High School. The second step in the reorganization of secondary science is the determination of a general program of science courses to be offered and of the sequence and curriculums in which they shall be offered.

The conditions usually prevailing in large four-year high schools make possible a wide differentiation of science courses, since there are likely to be enough pupils with special interests to constitute adequate classes in differentiated science courses. In such four-year high schools the following plan is recommended:

First year—General science, including hygiene.

Second year—Biological science, including hygiene; courses may consist of general biology, botany, or zoölogy.

Third and fourth year—Differentiated elective courses to meet special needs and interests as follows:

a. Chemistry—General chemistry, and chemistry specialized for various curriculum needs, such as household chemistry, industrial chemistry, etc.

b. Physics—General physics; and physics specialized for various curriculum needs, such as physics of the home, industrial physics, etc.

c. General geography, or physiography.

d. Advanced biological sciences.

The science program of the Philadelphia high schools, according to the printed program of "High School Courses of Study" (see Table 1 of this report), follows in the main the general plan recommended above. The following variations are noted:

1. The requirement in Physiology and Hygiene in the fourth year.

This requirement is commendable, particularly in the case of pupils unable for any reason to take the course in general biology in the second year. The time allowance, however, of one period per week for one term is quite inadequate to accomplish much. An advanced course in Physiology and Hygiene with a time allowance of not less than three hours per week for one semester would be preferable and more in harmony with the importance of the subject.

2. The offering of geology and astronomy as electives in the fourth year.

General agreement has placed these highly organized subjects in the college rather than the secondary school curriculum. Some elementary phases of these subjects should be included in the general science course of the first year. An elective course in physiography

* U. S. Bureau of Education Bulletin No. 26, 1920, p. 23.

offered in the fourth year would provide material and problems of greater interest and value to adolescent girls and boys.

3. The offering of a course in elementary physcial science in the second year as an alternate for biology.*

The course in general science of the first year should give an adequate foundation for the more advanced courses of the third and fourth years. Every encouragement should be given to pupils to elect biology, and no alternative course is needed or should be given.

TABLE 1.—GENERAL PLAN AND SEQUENCE OF SCIENCE COURSES FOR THE PHILADELPHIA HIGH SCHOOLS AS SHOWN IN THE CITY PROGRAM†

Science Courses.	Curriculums.																			
	Academic.†					Commercial.					Home Economics.					Mechanic Arts.‡				
	Grade.		Required.	Elective.	Total.	Grade.		Required.	Elective.	Total.	Grade.		Required.	Elective.	Total.	Grade.		Required.	Elective.	
	A	B				A	B				A	B				A	B			
General Science	9	9	8	0	8	9	9	8	0	8	9	9	8	0	8	9	9	8	0	8
Biology or Physical Science	10	10	...	8	8	....	....	....	....	....	....	....	....	....	....	10	10	8	...	8
Chemistry	11 or	11 or	0	6	8	....	....	....	....	....	....	....	....	....	....	11	11	6	0	8
Laboratory	12	12	...	2	...	....	....	....	....	....	....	....	....	....	....	....	....	2		
Physics	12 or	12 or	0	6	8	....	....	....	....	....	....	....	....	....	....	11	11	6	0	8
Laboratory	11	11	...	2	...	....	....	....	....	....	....	....	....	....	....	....	....	2	...	...
Geology	12	12	0	4	4	....	....	....	....	....	....	....	....	....	....	....	....	....	...	...
Astronomy	12	12	0	8	8	....	....	....	....	....	....	....	....	....	....	....	....	....	...	...
Physiology and Hygiene	12	12	1	1	2	12	12	1	1	2	12	12	1	1	2	12	12	1	1	2
Applied Science	....	....	...	...	...	....	....	...	...	...	....	....	...	...	...	12	....	....	2	2

TABLE 1.—*Continued*

Science Courses.	Industrial Arts Curriculums.														
	Architectural and Mechanical Drafting.					Carpentry, Pattern Making, Cabinet Making, Machine Construction.					Electrical Construction.				
	Grade.		Required.	Elective.	Total.	Grade.		Required.	Elective.	Total.	Grade.		Required.	Elective.	Total.
	A	B				A	B				A	B			
General Science	9	9	8	0	8	9	9	8	0	8	9	9	8	0	8
Physiology and Hygiene	12	12	1	1	2	12	12	1	1	2	12	12	1	1	2
Applied Physics	10	10	8	0	8	10	10	8	0	8	10	10	8	0	8
Applied Chemistry	11	11	8	0	8	11	11	8	0	8	11	11	8	0	8
Strength of Materials	11	11	8	0	8	11	11	8	0	8	11	11	8	0	8
Electric Testing	..	..	..	..	..	..	..	..	..	..	11	11	6	0	6
											12	..	4	0	4
											9	9	4	0	4
Electricity	..	..	..	..	..	..	..	..	..	..	10	10	6	0	6
											11	11	4	0	4
											12	12	2	0	2

* See Addendum.

† "For graduation a student must earn at least 160 points. One period per week of 'prepared' work or two periods of 'unprepared' work taken for a term, constitutes a point." Figures used in the above table indicate points.

‡ Eight points of additional academic science are required for graduation in the academic and mechanic arts curriculums.

4. The limited provision made in the Commercial and Home Economics curriculums for the study of science.

The prescriptions of the City Program with respect to science studies in these two curriculums should specifically include not less than eight points of additional elective, related science.

RECOMMENDATION

In the formulation of a general program of science to be offered in the Philadelphia high schools, the plan recommended by the N. E. A. committee in its report* on the reorganization of science in the secondary schools be followed with such modifications as a study of the special needs and interests of the adolescent girls and boys of Philadelphia may require.

Criteria for Choice of Subject Matter. The third important step in the reorganization of secondary science is agreement upon criteria for choice of subject matter.

In the choice of subject matter for the various courses in science, only such material should be selected as is clearly within the range of the comprehension and interests of the group of pupils taking the course.

The traditional organization of the sciences is formal and rigid and permits little flexibility for the adaptation of subject matter to meet the varying capacities and interests of adolescent girls and boys. Such an organization is based on the theory that high school science is merely preparatory to more advanced study of science and should, therefore, deal with the fundamentals of the systematic organization of each science rather than with the present and probable life concerns of homogeneous groups of adolescent girls and boys. Science material should consist largely of facts and principles drawn from the activities and problems of the home, school, and community which will not only give pupils an intelligent understanding of the conditions and demands of modern life but also stimulate them to further study of the common questions and problems of everyday life. The science departments of several of the high schools of Philadelphia have wisely selected their material from the point of view just stated, others present for the most part the so-called essentials with their accompanying definitions and classifications, but with little reference to the life concerns of the pupils.

RECOMMENDATION

In the determination of criteria for choice of subject matter, agreement should be founded upon the general principle that the content of science instruction should be related at as many points as possible to the present and probable life concerns of the pupils taking any given course.

* U. S. Bureau of Education Bulletin No. 26, 1920, p. 23.

Preparation of a Complete Syllabus for Each Science Course. Agreement having been secured upon (1) the general aims and purposes of science instruction; (2) general plan and sequence of science courses to be offered; (3) criteria for choice of subject matter,—the fourth and final formal step in science reorganization is the preparation of a complete syllabus for each science course offered. Such a syllabus should be flexible, not rigid in its prescriptions. Rich in its suggestions of materials and methods, a syllabus should allow a wide range of choice to each school to meet the needs of its particular constituency, and to each teacher to make adjustments to fit the needs and capacities of varying groups of girls and boys.

Such a syllabus should contain for each course:

1. Statement of specific values of science study, in terms intelligible and convincing to pupils as well as to teachers.
2. Outline of content by topics and sub-topics.
3. List of laboratory exercises, required and optional.
4. List of problems and projects stimulating pupils to further study of the common questions and problems of everyday life.
5. Statement of special methods and devices.
6. Statement of local opportunities for the study of practical applications of science.
7. List of science books and magazines for supplementary reading by pupils.
8. List of reference books for both teachers and pupils.

RECOMMENDATION

Committees of department heads and teachers of science should be appointed from all the high schools, every head and every teacher to serve on one or more committees, to prepare for the approval of the city Superintendent of Schools a syllabus for each science course offered; the purpose of the syllabus being to give such helps and suggestions as will tend to secure: (1) a high level of science instruction uniformly in all the high schools; (2) an equal opportunity for all high school pupils in Philadelphia to grow in the knowledge and use of scientific method in meeting the problems and situations of everyday life and withal to appreciate increasingly the indispensable part science plays in the development of the human and material resources of our national life.

General Character of Science Instruction. The teachers in the Philadelphia high schools of science have had as a whole excellent academic training. All are graduates of first-grade colleges or universities. Many of them have earned the Master's degree and some are in possession of the Doctor's degree.

The task of justly and fairly evaluating the service and influence of teachers is one of very great difficulty. However an examination of the content of the work done and the methods of instruction pursued revealed frequently not only a lack in uniformity as to aims and procedures but a lack of vision and educational outlook.

The organization of the subject matter in many instances simply follows the textbook used. The method of organized oral discussion should supplant much of the traditional method of procedure. In many of the high schools the "lecture method" is used largely; and in but few of the schools was the "socialized recitation" or the project method used to any extent. The constant use of the "lecture method" not only fails to arouse the average pupil to that activity necessary to growth but it provides little opportunity for "locating" the pupil with reference to his interests and his weaknesses.

Few teachers are receiving intensive supervision. Heads of departments should be thoroughly familiar with the most effective special methods in their subjects. Well defined aims and coördinated effort are needed by the teachers of a department, as of a whole system. Without a clear-cut program, the work of instruction will be haphazard and ineffective.

There are, however, numerous outstanding examples among science heads and teachers of capable leadership and efficient instruction, a leaven which under wise direction should be sufficient to leaven the whole lump.

The need of a city-wide plan of supervision of the science work of the Philadelphia high schools is imperative in order to insure the professional growth of teachers in service and a uniformly high standard of science instruction in all schools. Such a plan is recommended below.

Correlation of High School Science with Elementary Science. While "the science course in any high school should be so organized as to constitute the best training for that period, regardless of any further sciences that the pupil may take," the organization of high school science must have regard for the work in elementary science of the preceding grades.

In order to insure continuity of instructional aims and purposes, the science work of both the elementary and high school grades should be organized as a single supervisory unit. The need of the agency of a supervisor of science in the Philadelphia public school system is urgent. The functions of such a supervisor would be to

1. Direct the work of reorganization of science in the secondary schools.

2. Direct the planning of a science program for the elementary schools.
3. Keep the reorganized science programs dynamic and constantly sensitive and responsive to changing conditions in school and community.
4. Call groups of science teachers and heads into conference to determine means of promoting professional growth in service and the progressive development of science syllabi.
5. To develop and administer a plan for the supervision of the work of science instruction in all grades of the public schools.

RECOMMENDATION

A supervisor of science should be appointed to develop and direct the science work of all grades of the public schools.

Laboratory Facilities and Equipment. Men at the head of great industrial enterprises see to it not only that their offices and work shops are well equipped but that the equipment is kept abreast of the times.

Schools are great business enterprises in which millions of dollars are annually invested for the purpose of increasing the service-value of the individual.

In the majority of the high schools the equipment and laboratories are inadequate.

With but few exceptions, the supply of desks, the number and size of hoods, the devices for ventilation (where such exist), and provision for auxiliary supplies are inadequate. In some of the laboratories the drains were plugged; and it appears that such conditions are not corrected as promptly as is desirable.

In many cases of the "lecture-rooms," devoted to the use of classes in chemistry and physics many "wall-charts" and "tables" regarded as standard equipment have not been supplied.

In a number of the high schools "lecture-laboratory" rooms were found. At one end of the room the seats are raised in tiers; and at the other end, laboratory tables are located—the theory of this arrangement being that part of the pupils may do laboratory work while another section is reciting or listening to a lecture.

A shortage of lecture and recitation rooms makes it necessary to use the laboratories for such purposes. It is not unusual to find a teacher giving a lecture or conducting a recitation in a laboratory devoted to either physics or chemistry. In such instances approximately one-half of the pupils had their backs to the teacher and were noisy and restless. On several occasions it was observed that a large laboratory was made to serve as a double lecture-room; that is, at one end of the room an

instructor was lecturing to a class, and at the other end another instructor was doing likewise.

In many of the high schools practically no library facilities are available. Therefore, apparently little or nothing is achieved in the way of familiarizing the student with library methods, or in creating an appreciation of the need or value of magazines and books in pursuing scientific studies. This limited supply of books, charts, maps, and other illustrative material may account to some extent for the over emphasis upon the "lecture method."

RECOMMENDATION

A special committee should be appointed by the City Superintendent to make a study—under the direction of the supervisor of science, if and when appointed—of (1) laboratory space for science work; (2) science equipment; (3) library facilities for science work; and make to the Superintendent of Schools recommendations covering the needs of each school to meet the requirements of the reorganized science program.

RECAPITULATION OF RECOMMENDATIONS BY TOPICS

Steps in a Proposed Reorganization of Secondary Science

1. General aims and purposes of science instruction should be developed in harmony with and directed toward the realization of the main objectives of secondary education.

2. In the formulation of a general program of science to be offered in the Philadelphia high schools, the plan recommended by the N. E. A. Committee in its "Report on the Reorganization of Science in the Secondary Schools" should be followed with such modifications as a study of the special needs and interests of the adolescent girls and boys of Philadelphia may require.

3. In the determination of criteria for choice of subject matter, agreement be founded upon the general principle that the content of science instruction should be related at as many points as possible to the present and probable life concerns of the pupils taking any given course.

4. Committees composed of department heads and teachers of science should be appointed from all the high schools, every head and every teacher to serve on one or more committees, to prepare for the approval of the City Superintendent of Schools a syllabus for each science course offered; the purpose of the syllabus being to give such helps and suggestions as will tend to secure: (1) a high level of science instruction uniformly in all the high schools. (2) an equal opportunity

for all high school pupils in Philadelphia to grow in the knowledge and use of scientific method in meeting the problems and situations of everyday life and withal to appreciate increasingly the indispensable part science plays in the development of the human and material resources of our national life.

General Character of Science Instruction

(Provided for in the next recommendation.)

Correlation of High School Science with Elementary Science

5. A supervisor of science should be appointed to develop and direct the science work of all grades of the public schools.

Laboratory Facilities and Equipment

6. A special committee should be appointed by the City Superintendent to make a study—under the direction of the supervisor of science, if and when appointed—of (1) laboratory space for science work, (2) science equipment, (3) library facilities for science work, and make to the superintendent of schools recommendations covering the needs of each school to meet the requirements of the reorganized science program.

ADDENDUM

The Superintendent of Schools reports that the current revision of the High School Program of Studies contemplates dropping "Elementary Physical Science" as an alternate subject with Biology in the second year.

CHAPTER XII

SOCIAL STUDIES

Getting the Facts. The materials upon which this report is based were gathered, in the main, in three ways:

1. By an examination of the printed courses of study in history and civics.

2. By discussing with superintendents and principals the aims which they seek to achieve through the use of the social studies and the general character of the work done in such studies in their schools, and by conferences with teachers, singly and in groups, upon the purposes, procedure, and results of their work in history and civics.

3. By actual observation of classroom teaching of history and civics in the elementary schools. Visits were made in all parts of the city, and in schools that differed widely in their general environment and in the conditions under which their work was being done.

At least one day was spent in each district in the city. It will be noticed that twenty-three schools were visited, and that the work of sixty-eight teachers was observed.

The Course of Study in History in the Elementary Schools.—Preparation. The present course of study in history for grades one to eight of the public schools of Philadelphia was authorized by the Board of Public Education, April 10, 1917. Prior to that time, the course of study in history provided that United States History to 1763 should be studied in the fifth grade, that the period from 1763 to 1846 should be covered in the sixth grade, and that the subject should be completed in the seventh grade. One-half of the eighth year was devoted to a topical review of American history and the other half to the study of civil government. The new course of study, which has now been in use about five years, is based on the report of the Committee of Eight to the American Historical Association on the Study of History in the Elementary Schools. Some modifications have been made, however, in the course suggested in this epoch-making report, and, wherever possible, special emphasis has been placed upon important events in the history of Philadelphia and of Pennsylvania.

Carefully chosen and well planned type lessons accompany the course and are suggestive to teachers of the methods to be used in presenting this material.

Aims and Content. The aims and content of the work in history for the elementary schools of Philadelphia, as they are set forth in the printed course of study, may be summarized briefly as follows:

Grades One and Two. In grades one and two the object of the course in history is to give the child some idea of primitive life and an appreciation of public holidays. The work is presented in stories, and dramatization is emphasized as an accompaniment to the story telling. The time allotment for history in these grades is twenty minutes a week.

Grade Three. In grade three the course aims to give the pupils vivid pictures of characters and incidents of other times by means of stories dealing with a few of the heroes of the world. Men and women who overcame obstacles and achieved great things for the race are chosen as the themes of these lessons. The stories told are to be illuminated with pictures, objects, and other suitable material, dramatization is continued, and its correlation of the work with drawing and manual arts is suggested. Two twenty-minute periods a week is the time allotment for history in this grade.

Grades Four and Five. In grades four and five an informal survey of American History is made through a study of the lives of the nation's leaders. In grade four special emphasis is placed upon events occurring in Pennsylvania and upon eminent men connected with the history of Philadelphia. "The aim is to create historical impressions rather than to teach historical facts." The oral story before the textbook, the collection of historical material, pictures, clippings, post cards, etc., visits to places of historical interest, dramatization, and other opportunities for self-expression on the part of the pupils are suggestions as to method in these grades. The time allotment for history is two twenty-minute periods a week in grade four, and three twenty-five-minute periods a week in grade five.

Grade Six. In grade six such lessons are taught from the history of the world previous to permanent settlement in the United States as are necessary to some understanding of the racial, intellectual, and spiritual elements out of which the history of our own country has grown. The aim of this study of the European background of our history is to lead the children to know and to appreciate the worth of some of the contributions made to the present by the Greeks, the Romans, and the Germanic peoples. Special stress is laid upon the study of life in the Middle Ages, upon the Crusades and their results, upon the discovery and exploration of America, and upon the rivalry of ambitious European nations in the New World. It is suggested that throughout this year a textbook be supplemented by readings from selected groups of books; that the blackboard, pictures, available museum material, and outline maps should be used freely; and that correlation with geography should be established. Three twenty-five minute periods a week are allotted to history in grade six.

Grade Seven. The course of study for grade seven covers the history of America from the opening of the seventeenth century to the close of the War of 1812. Its declared aim is "to acquaint the pupils with those salient points of their country's life-story that every intelligent American citizen should know, those facts which have made possible the present, and only in the light of which can the present be properly interpreted." In this grade, the pupils are trained in the use of textbooks through frequent lessons in which they build an outline, paraphrase the text, compare events, estimate characters, or show relationships. Attention is to be given to the influence of geographical factors and constant use is to be made of maps, pictures, and other available illustrative material. Three thirty-minute periods a week are allotted for work in history in grade seven.

Grade Eight. The course in history for grade eight covers the period from the close of the War of 1812 to the present time. Its declared aim is "to have the pupils know the various political, industrial, and social forces that have operated during the national period of our history, to produce the present, and to interpret present day movements in the light of that knowledge." Its methods are those of the preceding grade, with a wider use of supplementary reading and a definite study of current events to which approximately one-third of the time is to be given. Three thirty-minute periods a week are devoted to history in this grade.

Comparison with Other Cities. In the main, the printed course of study in history for the elementary schools of Philadelphia is in harmony with the best educational theory and practice in our country.

The most serious objection raised by the teachers of Philadelphia to the course of study in History for the elementary schools of their city is that the course is overcrowded. It is not possible, they say, to do well the work expected of them in the time allotted to this branch of study. This complaint was heard most frequently against the work outlined for grades five and eight. A study of the following table,

TABLE 1.—TIME GIVEN TO HISTORY

Grade.	Hours per Year.	
	Philadelphia.	The Average of Fifty American Cities.
1	13⅓	27
2	13⅓	31
3	26⅔	35
4	26⅔	57
5	50	67
6	50	71
7	60	91
8	60	117
Total	300	496

however, suggests that the difficulty which teachers experience in completing the outlined work in history to their satisfaction is not so much due to an overcrowded course of study as it is to an inadequate allotment of time to this subject.

(The figures for the 50 American cities in the foregoing table are from Henry W. Holmes' "Time Distribution by Subjects and Grades in Representative Cities," in the Fourteenth Year Book of the National Society for the Study of Education, Part I, 1915.)

As the lessons in history and civics alternate in the elementary schools of Philadelphia, three lesson periods each week being given to history and two to civics, if we add the time allotted to history and that allotted to civics we shall have 500 hours—approximately the same amount of time that was devoted to history alone in 50 progressive American cities in 1915.

The Course of Study in Civics in the Elementary Schools.—Making the Course. The course of study in civics in grades one to six for the public schools of Philadelphia was authorized by the Board of Public Education July 11, 1916, and the work in the same subject outlined for grades seven and eight was approved by the same body January 9, 1917. Prior to the adoption of the present course in civics the only work in that branch given in the elementary schools of the city was a brief course upon the Constitution of the United States. It thus appears that the new course in community civics has been on trial in the elementary schools of Philadelphia between five and six years.

In making the Philadelphia course of study in civics free use was made of the excellent syllabus on "The Teaching of Community Civics," contained in Bulletin No. 23, 1915, of the United States Bureau of Education. The purpose of the work in civics is declared to be the making of good citizens through such instruction and training as will develop right civic habits and ideals in the rising generation. The good citizen is defined as "one who habitually conducts his own affairs with proper regard for the welfare of the communities of which he is a member, and who is active and intelligent in his coöperation with his fellow members for the common good." The real tests of good citizenship, as thus defined, are right thinking, right feeling, and right action. The course of study assumes that right thinking, feeling, and action in civic affairs are based upon sound morals; it therefore provides for training in right moral habits in the lower grades, and declares that the results of this definite instruction in the civic virtues should be cumulative as the pupil advances through the grades.

Summary of Content. Briefly summarized, the Philadelphia course of study in civics for the elementary schools provides that in grades one

to four there shall be given concrete lessons upon such fundamental virtues as obedience, cleanliness, orderliness, courtesy, helpfulness, punctuality, truthfulness, care of property, fair play, safety, kindness to animals, thoroughness, honesty, courage, self-control, thrift, and perseverance. With a view to the development in the minds of the children of the ideas of service, dependence, interdependence, and coöperative duties, additional lessons are introduced in grade three upon the various people who supply us with food, clothing, shelter, fuel, and who help to keep us well or aid us when we are ill. This study of those who serve us is continued in grade four with lessons upon the policeman, the fireman, the postman, the street cleaner, the garbage collector, the ash collector, and the rubbish collector. In grade five the children advance from a study of the people who render direct service to the community to those who render a more indirect service (through pipes and wires), such as water, gas, electricity, the telephone, and from there the advance is to the people who render community service through institutions, such as the school, the playground, the library. The work outlined for grade five ends with a consideration of the city beautiful and of "Safety First." In considering the latter topic, the sources of danger in city life are pointed out and ways of protecting ourselves from these dangers are indicated.

In grade six, the industries of the city and the industrial life of the citizens are studied with the aims of developing in the child a pride in his city, of giving him vocational guidance, and of impressing upon him the desirability of staying in school as long as possible so that he may become a more intelligent worker and a better citizen. In this grade the various industries for which Philadelphia is noted, the industrial, commercial, and professional lines of work which open before youth, the conditions of work, and the ethics of business furnish the subject matter of instruction.

The aim of the civics work in the first six grades of the Philadelphia course of study is to inculcate the fundamental civic virtues; to acquaint the children with the complicated community life around them; and to show the young citizens that in order to achieve real and lasting success, adult citizens must exemplify the same ethical qualities in which they themselves are being trained. The work of the next two years has mainly to do with the fundamental elements of civic welfare, the means or agencies employed in securing them, and the responsibility resting upon the junior citizens of the class to coöperate with the agencies. In grades seven and the first half of eight, health, protection of life and property, education, recreation, civic beauty and community planning, communication, transportation, and wealth are studied. The course of study lists the means by which each of these elements of warfare is

secured and suggests that the number of these means to be investigated in detail must depend upon their relative importance and the time available. It makes emphatic the statement that "only a few of the subtopics can possibly be covered or should even be attempted." The means or agencies of government are similarly investigated in the last half of grade eight under these general topics: charities, correction, how our laws are made, and party government.

Method. The printed course of study in civics is accompanied by definite and sensible suggestions as to method in teaching it in the schools. The fundamental civic virtues are to be inculcated in the earlier grades by means of stories, poems, songs, games, and dramatization. Actual school conditions and incidents that may arise in the daily life of the school are to be utilized by the teacher in giving point to her instruction. When the children begin to study the community and those who serve it, conversation, visits to people at work, appropriate reading matter, and topical reports will all play their part in arousing interest and providing information. In grade six illustrative talks, visits to industrial plants, pictures, and reports will have their place. The more definite study of welfare and of the agencies for securing it, in the later grades, while utilizing the methods of instruction just named, will be closely bound up with the constant use of current topics. To this end free use will be made of newspapers, magazines, and other collateral material. The bulletin board will become a classroom necessity, and gradually there will be formed a civics laboratory in which reports, bulletins, pictures, lantern slides, plans and charts, maps, samples, and models will be preserved ready for use.

The new course of study in civics in the elementary schools of Philadelphia is in harmony with the most progressive thought in the country upon the teaching of citizenship. As a whole it seems admirably adapted to its purpose. Principals and teachers quite generally agree that it is working out satisfactorily in actual school practice, though some of them suggest minor modifications in it.

Facilities for School Work. We turn from the foregoing summary of the aims and content of the courses of study in history and civics, as they are stated in the printed manual of study, to examine the means which are provided to facilitate the teaching of these social studies in the schools.

The study of history and of community civics, even in the elementary schools, requires a library and the ability to use it. Books are the most useful tools of the history teacher. At best only a relatively small number of hero tales can be told in grades three, four, and five; but if the teacher can use these stories to open the door to historical

reading and to inspire in the children a desire to enter it, she will have taken a long step toward the realization of the purpose underlying the course of study in history for these grades. The cultural value of the classroom instruction in the European background of American history in the sixth grade will be greatly enriched by appropriate collateral reading from carefully chosen books. As the pupil travels upward through the grades, the best historical teaching demands an ever widening use of supplementary historical material of the right sort. The course of study in history for the Philadelphia schools truthfully observes that "interest will be aroused by giving questions that will necessitate the use of books other than classroom texts and by assigning questions and topics for individual reports." It is evident that the extended reading upon which the best teaching of the social studies in the upper grades of the elementary school is conditioned cannot be done unless suitable books are available in sufficient numbers. In a few of the widely scattered schools which we visited in Philadelphia we saw some supplementary reading matter for history and civics; but in none of them was the supply of such material adequate, either in quantity or in variety. Many of the schools depend largely upon neighboring public libraries for the supplementary reading for their pupils. It is believed that the books most used in this way would have much greater teaching value if they were available in the several classrooms.

Plenty of visual material of the right kind is scarcely less necessary than adequate library facilities if the best results are to be secured from the teaching of history and civics. From one standpoint, Philadelphia is particularly fortunate in this regard. At no other place in our country can teachers easily take their pupils to so many scenes made famous by great events in the early history of the nation. The schools of the city ought to make the largest use of the rich opportunity with which they are thus favored. Instruction in the social branches is always greatly facilitated by the use of pictures, charts, desk and wall maps, lantern slides, and moving pictures. Some of the Philadelphia schools are making a good beginning in the collection of means for such visual instruction. Many others are sadly lacking in this respect. Some of the classrooms visited, and especially those in which there is departmental teaching of history and civics in grades seven and eight, lack an adequate supply of good maps.

A projecting lantern or a moving picture machine, or, better still, both of them, ought to be placed in every school. Schools having lanterns can procure slides from the Office of the Board of Education, from the Philadelphia Commercial Museum, and possibly from private sources.

No suggestion of the course of study in civics for grades seven and

eight is more pertinent than the one in which each school is advised to establish and maintain a civics laboratory. A few of the schools visited have already made a beginning in this direction. In some of them the bulletin board is used very effectively. It is highly desirable that all of the schools should take steps for the collection, classification, and proper filing of reports, bulletins, plans, charts, maps, samples, models, pictures, and any other material that will help to make concrete, and thus to make more effective, the work in community service.

Classroom Teaching.—What was Observed. When we examined specifically the actual teaching of lessons in history and civics by the teachers whom we saw at work, we found much that merits a high degree of commendation. In most instances, the lesson observed had evidently been carefully planned in advance, and as a rule the plan was skillfully carried out in the conduct of the recitation. In the lower grades, in which the oral story is largely used as a medium of instruction in history and civics, many of the teachers told these stories with feeling; and by their questions, and through the direction of the discussion which these questions elicited, taught the lesson of the hour with a fine discrimination of relative values. It was distinctly noticeable that the best work in handling the elementary phases of the instruction in history and civics prescribed in the new courses of study in those branches was done by the younger teachers, who have been trained since these courses were adopted. In many cases, the questions asked in the upper grades were stimulating and thought-provoking. Many of the teachers were as careful to reach the weaker and less interested members of their classes as they were to utilize the energy of the brighter pupils. A few of the teachers made skillful use of illustrative material, dramatization, topical reports, and the coöperative working out of projects by committees of pupils. The vast majority of the children in the schools visited were keenly interested and eager to answer questions. They gave abundant evidence that they enjoyed their school life.

Candor compels us to add that there is another side to the story of the teaching which we saw in the schools of Philadelphia. A few of the teachers visited seemed to have no particular plan in the lessons they were attempting to teach, and some others were very superficially carrying out any plan they may have had in mind. Occasionally, the teaching of the civic virtues or moralities in grades one to three was dogmatic rather than concretely suggestive. Too often the teaching of the history lessons in the upper grades was formal and verbal. It tended to lead the pupils to remember rather than to compare, discriminate, analyze, and decide. Too often the vital point in a lesson was overlooked. The children answered the questions of the teacher, but they

rarely asked her any questions, and in only two or three instances did we hear pupils question each other. It was almost universal in the schools which we saw that the children talked only to the teacher when they recited or answered questions. Apparently the socializing value of the recitation is too little comprehended or too seldom concretely sought in the elementary schools of Philadelphia. Quite generally, too little use was made of supplementary and collateral reading in connection with the lessons in history and civics, probably in many cases because an adequate supply of such reading was not immediately available.

Interpretation of What Was Observed. In his recent book, "Sociological Determination of Objectives in Education," Professor David Snedden of Teachers College, Columbia University, points out that the objectives of education may be classified in two groups according to the presence or absence in each study of certain fundamental characteristics. In one group the outcome expected in the pupil is the ability to do, to execute, to express in action. Such studies provide us with usable knowledge. In the other group we study to feel, to absorb, to assimilate, to appreciate, to enjoy, and by so doing to enrich our lives.

An analysis of history and civics shows them to be composite in their nature. They furnish us certain definite and usable knowledge, and at the same time they may give us such intangible but no less real values as motive, appreciation, enjoyment, and culture. It follows that the teaching of history and civics is at its best when it is of such a nature as to develop both of the types of value just set forth, and that it may be justly criticised if it noticeably fails in the development of either of them.

We are now ready to apply each of these tests of educational value to the work in history and civics which we saw in sixty-eight typical and widely scattered classrooms in the elementary schools in Philadelphia. From the standpoint of the acquisition of definite knowledge which the pupil may use in the various future activities of his daily life the teaching of the social studies as observed in the elementary schools of Philadelphia must be given a high rank. Lessons intended to impress the facts of these studies were skillfully planned, thoroughly taught, and frequently reviewed. Many of the teachers directed the study of their pupils in such a way as to emphasize the important facts in the lesson. Generally speaking, the children were under a constant fire of questions whose primary aim was to determine if they knew or if they remembered, and a very large proportion of the pupils answered these questions eagerly and correctly.

But when we examine critically the teaching of history and civics in the elementary schools of the city from the standpoint of its contri-

bution to the second group of educational objectives mentioned above —when we try to estimate what it is doing toward forming worthy aims and habits, stimulating initiative in the pupils, and giving a richer spiritual meaning to their lives—it is not clear that the teaching of the social studies merits so high a degree of approbation. That all earnest teaching does something in this direction is no doubt true. It is also true that here and there in Philadelphia a principal of vision and of real capacity for uplifting leadership is getting wonderful results in leading boys and girls toward higher ideals and finer living through the influence of patriotic songs, inspiring history stories, and helpful civic activities in the school and its neighborhood. Occasionally a classroom teacher because of her great soul and the fine artistry of her work is doing the same thing despite the lack of inspiring leadership in her immediate superior. But the majority of the principals and teachers whom we were privileged to visit, while they were earnest and intelligent in their work, and, as we have said, highly successful in it so far as the inculcation of knowledge is concerned; and successful too, in many cases, in leading their pupils to think about the intellectual aspects of history and civics, either failed to comprehend the vital spiritual objectives in the social studies or neglected to use the means which are most helpful in attending those objectives. *In brief, much of the teaching of history and civics in the elementary schools of Philadelphia seems aimed at the head rather than at the heart.* We believe that the best teaching of the social studies must aim at both, that it must seek to attain both of the educational objectives which Professor Snedden points out in the book cited above.

The impression, which we have just stated, that much of the teaching of history and civics in the elementary schools of the city fails to attain in full measure those spiritual objectives—motive, initiative, appreciation, culture—which are none the less real because they cannot be measured by examination or tested by the methods of science, is based upon the consideration of three facts which we observed in most of the schools which we visited.

1. The paucity of supplementary reading matter in history and civics. We think it is certain that the teaching of history and civics in grades four to six inclusive, through the media of oral stories and simple textbooks, will fall short of attaining its highest possible objectives unless these stories and texts are supplemented with a great deal of collateral reading, so selected as to fit the degree of maturity of the children in these grades. Such reading should be rich in hero tales, interesting historic anecdotes, and thrilling stories of human achievement. In none of the elementary schools which we saw is there a

sufficient number of books of the right sort to make it possible to do the desired amount of collateral and topical reading.

2. The absence of the right kind of social relationships in the classroom. In the report of the survey of the Butte Public School System, Professor George D. Strayer suggests that the right sort of social relationships in the classroom can be indicated by asking the following questions concerning classroom procedure.

a. Do the children do most of the talking?

b. Do the children ask questions of each other?

c. Are the questions which the teacher asks such as to stimulate discussion among the pupils?

d. Do the children answer questions which are put to them by the teacher, or by other children, only after careful thought, and are they willing to defend their position against the suggestions of doubt which may be expressed by other pupils?

e. Do children feel that it is most worth while to help each other, and do they commonly feel responsible for the progress of the class?

f. Are the children so arranged during the recitation period as to be able to see each other?

g. Is it the habit of every child to speak to all the members of the group, rather than to the teacher?

If we apply these questions to the classes in history and civics which we surveyed in Philadelphia, the third question (c) could be answered with "sometimes." All the other questions in the list would have to be answered in the negative. In the main, the children recite to the teacher the lessons which they have learned or answer her questions upon these lessons, rather than work out together problems and projects in history and civics. We saw a few notable exceptions to this general practice.

3. The lack of those activities and school organizations through which the instruction in civics may function in real life, by giving boys and girls opportunities to learn to be citizens by being self-directing citizens of the school community and its neighborhood; thus forming those civic habits and cultivating that sense of civic obligation which will do more than any formal instruction in civic virtues or in the agencies of government to make them good citizens when they become men and women.

Some principals and some teachers of the social studies are already doing splendid work along this line through the League of Good Citizenship and other similar organizations in their schools. Health activities of various kinds, the promotion of Red Cross work, "clean-up" campaigns in the school and in the neighborhood, safety patrols of boys who help little children on their way to school to cross the crowded

streets, and school festivals and pageants are a few of the many activities along this line that might be cited. But organizations for the promotion of these helpful civic activities are far from being universal in the elementary schools of the city; and in too many cases where they exist they grow out of and depend upon the authority of the principal and the teachers rather than the initiative of the boys and girls. Some of the principals are keenly alive to the importance of a larger measure of pupil initiative in these civic organizations in their schools but do not quite see how to bring it about under the present school organization. A few of them said that they hoped to see much more of it as the prospective junior high schools are developed.

RECOMMENDATIONS

The following recommendations would add materially to the value of the courses in history and civics in the elementary schools of Philadelphia:

1. Such revision of the courses of study in history and civics, suggested by actual classroom experience, as will fit them more closely to the needs of the children of the several grades and better meet the limitations imposed by the time allotted to each of these branches. Such changes, made from time to time in every growing course of study, will usually not be extensive.

2. The providing of suitable supplementary books in sufficient numbers and variety would greatly enrich the elementary work in the social studies in the grades. We saw classes which were provided with fifty copies of a supplementary text. Five copies each of ten different books would have been better, and one copy each of fifty well chosen books would have been far better still.

3. A considerable extension of the provision already made of suitable material for visual instruction.

4. A more general development of the civics laboratory so admirably described in the Manual of the course of study in civics.

5. The provision of expert supervision in the grades, supervision which will help the teachers to realize the higher values in the social studies, which will aid them in getting just the teaching material for these studies that they need and show them how to make the wisest use of it, and above all, which will constantly keep before them the greatness of their work and applaud their success in it.

The Course of Study in Social Studies in the High Schools.—Its Adoption. A transition is going on in the Philadelphia high schools from the four history blocks recommended by the Committee of Seven in 1899 toward certain proposals of the National Education Association

Committee on Social Studies in 1916 and of the Second Committee of Eight recently dissolved. Nearly all of the schools are adopting the new plan, or at least introducing features that show its influence. There are classes that began under the old plan and are now doing work determined by that fact. But there are adjustments to meet the needs of the incoming classes and of the special commercial and industrial groups. For these reasons it was difficult for department heads to report definitely on the scheme that is now in process of adoption in their respective schools.

Required Studies. The adjustment that is now going on is in accordance with a core curriculum of the social studies as laid down by high school authorities of Philadelphia. For the first year this curriculum prescribed civics or history, the history being ancient for the first term and European for the second term. European history is elective in the second year and United States history is required in the third year. In the fourth year social science is required in the first term but is elective in the second term. The time allotment is four hours a week.

Suggested Changes. At this point it should be determined what fields of the social studies can be pursued with the most profit. There is a common agreement that the history of our own nation should be studied for one year. There is also a growing opinion that all pupils before they leave the high school should be given a survey of world development as a whole, with Europe as its central theme.

The work in this required history should be carefully and intelligently socialized. It could be organized around a few large topics and problems that will best reveal the origin and development of the conditions and institutions of today—a distinct educational service rendered by the study of history.

It is extremely desirable that the work in citizenship training should be continued through every year, just as English is. Courses four hours a week for four years are far preferable to courses five hours a week for only three years.

As many pupils leave high school at the end of the first year, the case for civics in this year is a good one. Experimentation should continue in first-year civics in order to determine the respective values of vocational-economic civics and general social science; and also to discover to what extent material should come from the fields of industrial and commercial geography.

The weakest single spot in the social studies course is the failure to deal with political organization and problems. The organization of the City and the State is almost wholly neglected, on the assumption

that such work is completed in the grades. Throughout the four years, but especially in the last one, a substantial amount of time and attention should be devoted to the study of government, with the work so far as possible organized about problems of the day.

Equipment. Most of the schools report a serious shortage of textbooks. It is common for inquiry to elicit the statement that many have worked for a period of weeks without textbooks. With very little other material to draw upon in most of the schools, and in every case with no supply of library material even remotely adequate to replace the textbook in large classes, the results are serious. Teachers are reduced to the necessity of lecturing and dictating notes, thus promoting teaching faults which are unhappily too common at the best. Some schools have supplies of old and discarded textbooks which are used in lieu of better ones. Measures should be taken to supply every class in every school with a sufficient number of modern textbooks.

There are marked differences in the matter of illustrative materials —maps, pictures, charts, models, lantern slides, etc. One school, for example, has a collection including several standard series of European wall pictures and a considerable number of illustrations from magazines, newspapers, and a series of art prints, filed and indexed for ready use. In most other cases, the school is either entirely without such illustrative material or possesses very little. Another school reports a large collection of lantern slides used for occasional lectures correlated with the history and civics courses. In a third school there is a remarkable laboratory for the study of industries, collected through a period of years by the head of the department; but this material is used for the commercial geography, and there is nothing corresponding to it for use in the history and civics course. One teacher in a very large department of a high school has collected a number of interesting pictures, many of which are exhibited on the walls of the classroom, but there is no department collection for general use. In a few cases teachers have wall charts and maps made by the pupils, but there is very little evidence of appreciation of the possibilities offered by this plan for the gradual accumulation of a large amount of useful illustrative material for regular class work.

A few of the schools, apparently those most recently established, seem to be well equipped with maps and charts, but in most of the schools the equipment is not adequate in amount or up-to-date in character. Good maps, including those to illustrate recent changes in current conditions, are of prime importance, and an inventory should be promptly made with a view to providing proper equipment in all the schools where it is now lacking.

The library situation in regard to the social studies is far from satisfactory and it could be improved without great additional expense. Well equipped libraries should be established in all the high schools; and, in addition, some such coöperation as exists in Kansas City and other places should be established between the high schools and the city library system.

Classroom Teaching.—Preparation of Lessons. The inadequacy of equipment is naturally reflected in classroom procedure, although it would doubtless be fair to say that a clearer and stronger appreciation of certain kinds of work on the part of teachers and administrative officials would soon bring about an increase in equipment. Acquaintance with standard works, interest in new books, ability to use reference works and to study real problems in a library, are not among the aims now seriously sought by the high school teachers. Nearly every school reports a desire to interest pupils in such matters, and a few with library facilities have mimeographed lists of topics and readings for reports and essays. It is most exceptional, however, to find any signs in the classrooms that such work is actually and regularly done. In those cases where results did appear in the classroom they were very limited in scope. In one class, for example, the instructor and pupils used perhaps half of the period in reading from a contemporary document bearing upon the period of American history then occupying the attention of the class; but the reading was not accompanied by explanation or illuminating comment, by class discussion, by inquiry from the pupils, or even by questions from the teacher, In another case the last third of the period was used for three reports which had been memorized and were recited by the pupils. They had been prepared from the reading of one book only, and in two cases the work of reference was merely a textbook. No questions were raised as to the source of information, the reliability of the reports, or the different types of material available for an investigation. It must be admitted that the problems of collateral reading and report work are by no means simple in large schools, where there are many sections of the same class working at a given time on the same subject. The problem is not impossible of solution, however, and an effort might very well be made to carry out such concrete suggestions as have been made, for example, by Professor Henry Johnson in Chapter XIV of his *Teaching of History.*

Use of Teaching Aids. Actual observation of the work of about sixty teachers for entire periods or for the last fifteen minutes failed to show any evidence of the use of pictures, charts, models, and similar illustrative material. Several heads of departments stated that such material is used as a part of the regular instruction, but with two

exceptions not a single actual example of such use was observed in the classrooms of the eleven high schools. It seems fair to conclude that such concrete materials "for making the past real" are very little used. A committee of experienced teachers might profitably study this question and make recommendations regarding minimum equipment and the practical use of illustrative materials. Such a study should include a consideration of the possibilities of "home-made" material prepared by the pupils themselves, many of whom are skilled in drawing and handwork and would be eager to prepare special charts, models, or wall maps as a contribution to the school. Such work should be prepared from reliable sources as carefully as a written essay, and might as legitimately be considered a report entitled to academic credit.

Maps are used to a much larger extent than are other forms of illustrative material; but they might profitably be used a great deal more than they are. In a number of cases class exercises were observed where the use of historical or physical maps, or a quick, simple blackboard sketch would have been very helpful, yet the recitation was proceeding without any such visual assistance for the pupils.

Textbook Method. The textbook and question and answer method, so characteristic of American schools as compared with European, is all too common in Philadelphia. The textbook is usually the beginning and the end. Questions and answers on the details of the text, constant quizzing to extract bits of fact from the pupils, occupy an appalling proportion of the time. Formal outlines are employed in some cases. These may be helpful where they are guidance outlines for study; but the informational type of outline, as used extensively in one large high school, inevitably places the emphasis upon the memorizing of highly epitomized summaries.

Aim of the Recitation. In a very large proportion of the recitations observed no general subject or problem for the period was announced, either by the teacher or by the pupil, and in other cases the subject was stated in a very vague and general manner. The recitation proceeds in such cases from detail to detail without any apparent relation to a larger purpose. Similarly, most of the recitations are brought to an end without any definite conclusion or interpretation or solution of a problem. In only one or two cases was an attempt made to relate the work of the period to general aims in the course as a whole. The observations leave no doubt that the fault here referred to is a common one. An excellent example of what can be done was observed in one recitation, where the teacher of a third-year class in American history opened the recitation by promptly obtaining from the class a clear definition of the topic of the day, and followed this by outlining on the blackboard

with the aid of the class the main points to be considered. These points were discussed in logical order, with a brief summary of conclusions at the end, and the work of the day was related to the aims of the general work of the term.

Three Kinds of Recitation. The question and answer procedure, based on the textbook, is associated in some cases with a very definite attitude of "hearing lessons." The teacher holds his roll book in hand with pencil poised for grading, seemingly unconscious of the fact that such a pose necessarily distracts the attention of the pupil from the real work. The idea that a pupil is reciting for the teacher, instead of contributing to a group enterprise of common interest for all, is revealed by the frequency of such expressions as "Tell *me* so and so," "Show *me*," "*I* want you to do thus and so," etc. The pupil inevitably responds by seeking to discover what the teacher "wants" and to give it to him in the identical form desired. Interest in the problem before the class and in the general field of work is not stimulated.

These conditions are by no means universal, but they are frequent enough to require special mention. In nearly every school there are some teachers who do better work than the average. There are also extremes in each direction. In certain schools there is much lecturing, which is heartily to be condemned for high school pupils. Some teachers are attempting the "socialized recitation." The varying results with the "socialized recitation" may be clearly indicated by describing two exercises.

In one case, in a girls' school, the teacher of a small fourth-year class in "Problems of Democracy" devoted the period to an exercise on the study of the family, several pupils being successively brought to the desk to make their reports on the Indian family, the Greek family, the Roman family, as the case might be. Pupils came forward promptly, spoke readily and on the main point, invited questions, and answered a number that were asked. A few minutes before the close of the hour the teacher, who had hitherto been in the rear of the room, returned to the desk and rapidly brought together certain definite inferences and conclusions, pausing now and then to question the class. The exercise was adapted to the work of the day, carried out efficiently, and ended with definite results.

In another school, a class was devoting the hour to an industrial topic in American history. A pupil was called to the front of the room and placed in charge of the class for the period. He undertook a combination of lecturing and quizzing, and in the first five minutes got out of his depth. Some of his assertions and answers to questions impressed his classmates as decidedly humorous. The exercise seemed to end

nowhere in particular, and it is not apparent that it served any useful educational purpose. An immature child does not become better qualified to teach a high school class merely because the exercise is designated by some such term as "socialized recitation."

The work observed in the Philadelphia schools was, on the whole, commendably free from the propaganda attitude; but there was comparatively little to indicate any definite purpose to cultivate the power of independent thinking and the habit of approaching new questions and problems with an open mind. Not a single exercise was observed in which a distinction was made between primary sources and secondary authorities, or in which an exercise was undertaken to illustrate standards of judgment and methods of criticising and weighing evidence.

Attitude of Pupils. A class exercise devoted to testing memory of details from the pages of a textbook, while conspicuously advertising the fact the pupil is to be "marked," and without the use of visual aids or of an opportunity for discussion, cannot promote desirable mental activity. The most depressing condition observed was the indifference or passivity of a large proportion of the classes visited. Pupils ask very few questions, and it is most exceptional to find a recitation in which thoughtful inquiry is usual and frequent. Real discussion is as rare as signs of eager interest. Sometimes there is the delusive restlessness and waving of hands familiar to every experienced teacher, yet indicating nothing more than a desire of pupils to show that they can answer a question and get a mark. This is a wholly different thing from active curiosity and eager desire to debate and thresh out an issue or solve a problem. The only "socialized recitation" really worth while is one in which the pupils are consciously working as a group and actually participating in the investigation of some topic or problem.

Current Events. The Study of Current Events from a popular magazine, a practice that has spread rapidly in high schools during recent years, also appears in Philadelphia, especially in the high schools for girls. Most of this work is done in the "socialized recitation," which is interpreted to mean the chairmanship of a pupil; but in other cases the teacher conducts the exercise. Sometimes the period is devoted to one or two items of current news, in others to a long list of topics, in still others to some general topic like the method of passing a law, taxation, or transportation. The last type seems to be used as a variant or supplement to the study of current news, based on a "Problems of Democracy" department in a popular magazine.

One type may be indicated by the following recitation. The pupil chairman (beginning a minute or two before the entry of the teacher, who remained in the rear of the room) called for minutes of the

previous meeting and one or two items of business, then named in turn pupils who were to report. Ten topics were taken up, ranging from a "new wireless for Japan" to German reparations and English-Russian trade. Some topics received but a minute or less for discussion. There were some good questions from the pupils, but none of them was clearly and definitely answered. It is fair to ask if such an exercise either stimulates interest in current history or contributes any real knowledge. Most certainly it contributes nothing to training in study, habits of thoroughness, insight into difficult questions, or ability to understand and discuss evidence.

Another type of work was observed. Two or three topics occupied the entire hour, and in three different periods these included a subject or problem of general importance, like taxation or the process of enacting a law. It was thus possible to treat each point with some intensiveness. The teacher kept a general guidance throughout.

The problem of current events in the classroom is one of real difficulty, and it ought to be a subject of special study and frequent exchange of opinion, as well as of visits by teachers who are actually experimenting in classrooms. Certainly it is important to interest young citizens in what is going on in the world around them, but this cannot be done by merely placing a periodical in their hands. Nor is interest the one desirable aim. If the principles already laid down in this report have any validity, there should certainly be a definite relation between the "regular" courses and the study of what is going on at the moment. History should illuminate the present, and the events of the day must be part of the fund of experience for interpreting the past as a living past with meaning for the present. It is a mistake to attempt to touch vaguely and superficially upon every article in a periodical magazine, and surely reference to the current articles need not be confined to the special class hour for the magazine. Discrimination about sources of information, checking up of doubtful assertions, the ability to hold one's mind open until the evidence is examined, the intelligent use of reference works, have an even larger place than in the systematic courses, which are at least based on scholarly sifting and arrangement.

It would be far more valuable to confine the attention to a few really important items, disregarding the mass of purely ephemeral news constantly appearing; and to present these problems so as to give real education, and to make it increasingly clear that history and civics are ways of studying the world in which we live. At the same time it may be urged that general topics, like transportation or taxation or law-making, are not necessarily timely from the mere fact of their having been the subject of magazine articles, and that even news items are no sufficient reason for introducing a problem at a given point. In the

case of great outstanding events of general interest, such as a national election, the time of the happening may well determine the time for the study of the general problem; but for the most part the results will be better from well planned courses where the current events of interest are drawn upon as far as possible as the topic comes in its proper place.

Newer Types of Work. The newer types of work, in "problems of democracy," "social science", and "current events", make special demands upon the teacher for knowledge, intelligence, poise, and teaching skill. Merely putting these things into courses will not accomplish the results sought, and will sacrifice some older results that have their value. Observation of classroom work shows that the new kinds of work may be quite as formal, empty, and futile as the old-fashioned kinds of history and civics ever were. It also shows that much of the new as actually taught is vague, full of dubious generalizations, characterized by sentimentality and over-moralizing, all of which is sufficiently common in American life. The various faults and weaknesses of classroom work already described are present almost as much in the new fields as in the old. There should be a definite striving on the part of the teachers for a more scientific attitude. Established facts should be distinguished from theories or mere social superstitions; evidence should be distinguished from assertion. Contrasted points of view and opposing arguments might well replace pat solutions and easy moralizing. Without development in these directions the newer subjects will result in more harm than good in civic education.

RECOMMENDATIONS

1. It is desirable that the teacher of the social subjects should have preparation in history, economics, political science, sociology, and social psychology.

2. In several schools, including the largest in the city, the departments of history and commerce are combined, to the discomfort and detriment of both. *Competent general supervision and leadership in the social studies for the system as a whole would be justified by the number and size of the departments and the importance of the field.*

3. If the expansion of the field of the social studies now generally advocated is to go on, more time must be allotted them than was necessary for the old-fashioned history and civics, and these studies should extend through every year of the school. They should include suitable introductory study of our economic, social, and political institutions and problems; the development of the modern world, if possible from the origins of mankind to the present; a typical study of the development of our own nation; and a systematic examination in a critical

spirit of important public problems, with some regard to the experience of the past and the perspective of history.

4. The schools should be supplied with an adequate number of good textbooks, with suitable equipment of illustrative material, and with reference books and supplementary readings.

5. A persistent effort should be made by teachers, department heads, principals, and other officials to bring about an improvement in classroom methods in the directions indicated in the body of the report. In particular, there should be less slavish dependence upon the textbook; less devotion to a monotonous question-and-answer method; less preoccupation with "hearing a lesson" and more attention to a spirit of group enterprise under the teacher's leadership; more thoughtfulness about specific objectives in the work of the day and of the course; more effort to secure free discussion and general participation in class exercises, and to secure the ability to carry on independent study, examine evidence, and preserve an open mind until evidence has been found and examined.

APPENDIX I

ACHIEVEMENT TESTS IN ELEMENTARY SCHOOL SUBJECTS*

The Determination of the Number of Pupils to be Tested. Manifestly, to test every child in the Philadelphia schools in four or five elementary-school subjects would have been a tremendous task. Fortunately this was not necessary since it has been proved repeatedly that the ability of a group in any respect may be ascertained with reliability by the measurement of only a part of that group, provided the individuals tested are properly distributed among all the varying degrees of ability. The problem that the Survey had to solve then was how many children it was necessary to test and how they should be distributed in order to get an accurate measure of the Philadelphia schools as a whole with its 138,000 school children in Grades 3 to 8, inclusive. Rather than to depend upon purely theoretical conclusions alone, it was decided to make use, in addition, of the data that had been gathered from the giving of the Courtis Arithmetic Test, Series B, and the Monroe Silent Reading Test to all the pupils in the elementary schools of Philadelphia, Grades 4 to 8, during the previous year. The median scores for 40 buildings, 5 in each of the 8 supervisory districts selected at random were first computed and compared with the median scores of the respective districts and of the city as a whole. The number of buildings was then increased to 72, 9 from each district and similar comparisons made. It was found that the median scores of the 40 buildings differed but little from the district and city scores, although the average differences were slightly greater than in the case of the 72 buildings. These results indicated that the scores of approximately 24,000 pupils in 40 buildings taken at random would give a reliable measure for the entire city, and the theory of statistics warranted the use of this number as adequate. It was decided, however, in order that the survey might reach a larger number of buildings, to give the tests to approximately 24,000 children in 72 elementary schools, 9 from each of the 8 supervisory districts.

Selection of Schools to be Tested. It happened that each district superintendent had been requested through the city superintendent to rank the schools in his supervisory district—on the results of instruction,

* The administration of the tests—including the instruction, the determination of the number and selection of pupils to be tested, the instruction of the examiners, and of the principals in whose schools the tests were given, the oversight of the actual giving of the test, the scoring of the papers and the tabulation and computation of results—was placed in charge of Dr. Harlan Updegraff and Dr. LeRoy A. King, of the University of Pennsylvania, except that Dr. William S. Gray of the University of Chicago instructed the examiners and elementary-school principals as to the administration of the oral reading test. These persons are not responsible, however, for the interpretation of the results.

and on the general efficiency of the schools. The ranking thus made for another purpose was used in the selection of the buildings, and in the following manner: Each school had been ranked in each of these two respects for Grades 3–4, 5–6, 7–8, respectively. These ranks were weighted and combined into a general rank. The schools in each of the districts were then arranged according to their general ranks and as thus arranged divided into 5 groups, each group containing such a per cent of all the schools in the supervisory district as is represented in the 5 divisions of the surface of a normal frequency curve, namely:

1. 7 per cent in the highest group.
2. 24 per cent in the second group.
3. 38 per cent in the third group.
2. 24 per cent in the fourth group.
1. 7 per cent in the fifth or lowest group.

Thus in a supervisory district of 20 schools the highest group was composed of School 1; the second group of Schools 2, 3, 4, 5, 6; the third group of Schools 7, 8, 9, 10, 11, 12, 13, 14; the fourth group of Schools 15, 16, 17, 18, 19; and the fifth group of School 20. The one school in the first and last groups, two schools selected at random from the second and fourth groups and three schools from the middle group, selected in the same way, were designated as the schools to be tested. It was believed that this more scientific selection of buildings would give a better sampling of all the Philadelphia schools than a purely random selection.

Selection of Classes to be Tested. Having decided upon the number of pupils that were to be tested and having selected the buildings in which the tests should be given, the next step was to determine the number of classes in each of the 5 groups in each of the 8 district that would have to be tested. The 24,000 children to be tested were first distributed among the 8 districts in accordance with the average daily attendance in Grades 3 to 8 during the month previous to the giving of the test. The number of children thus assigned to each district was then apportioned among the grades in that district according to the average daily attendance in those grades. In the distribution of the pupils in each grade in each district among the five different groups of buildings as arranged, the same principle was followed as in the selection of buildings—i. e., in accordance with the percentages of the surface of the normal frequency curve. The number of classes in each group was ascertained by dividing the number of pupils by 40, the approximate average number of pupils in a class in Philadelphia. The classes were then apportioned among the various buildings in proportion

to the number of classes in each grade in each building. Only three other points need be mentioned in this connection: (1) Whenever only a portion of the classes in a particular grade in a building were to be examined the selection was made on the basis of the first letters of the teachers' last names beginning with the first letter of the alphabet. (2) Endeavor was made to select the same proportionate number of A and B classes of each grade as would be represented in the total enrollment. (3) Different classes were chosen in part for the different tests.

Selection and Training of Examiners. There were 50 examiners of whom 25 were either principals or teachers in the Philadelphia public schools that had been trained in the administration of tests in some higher educational institution, chiefly in the University of Pennsylvania, and 25 were senior students from the Philadelphia Normal School selected by the faculty of that institution. This latter group were carefully trained in the giving and scoring of each test in which they participated. The two groups met in a number of conferences for further instruction. Opportunity was given a large number of representatives from both of these groups to give the tests and to listen to the criticisms of the other members of the group. Great care was taken to secure exact agreement in the procedure of giving the tests.

Coöperation with Principals. The principals of the 72 schools in which tests were given throughout the city were called together for a conference, at which time mimeographed sheets of instruction were distributed. Not a small part of the success of the administration of the tests was due to the whole-hearted coöperation of each of the principals of the schools tested in following the instructions and principles of each examiner's program. Each examiner reported to the central office of the Bureau of Educational Measurements of the University of Pennsylvania each day, and was given his daily schedule showing the buildings to which he was to go, the test he was to give, the grades to be tested, and the number of classes in each grade. The principals concerned were informed that they might expect examiners at some time during the week, but they knew neither the classes which would be tested nor the subjects in which the tests were to be given.

Scoring and Tabulation. The scoring and tabulation of the results was performed for the most part by students of the Philadelphia Normal School including those who served as examiners. Careful training was given all of the scorers and expert help was secured for the tabulation. The whole procedure was given careful supervision. It was found that the scoring of the tests in arithmetic by the pupils in the higher grades

was so poorly done that it was necessary that all the papers be rescored. Results were tabulated in each of the districts—first, for each of the 72 buildings; next, for each supervisory district; and, finally, for the city as a whole. It is believed that every reasonable precaution was taken to secure the highest reliability of results and that the scores as computed represent with accuracy the standing of the Philadelphia schools in terms of the tests. The data used, the methods followed, and the specific results can be examined in the office of the Bureau of Educational Measurements of the University of Pennsylvania, Philadelphia. Lack of space prevents their inclusion in this report.

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